Health Care Financing

Status Report

Research and Demonstrations in Health Care Financing

Fiscal Year 1990 Edition

U.S. Department of Health and Human Services
Health Care Financing Administration
Office of Research and Demonstrations

Health Care Financing

Status Report

The Office of Research and Demonstrations (ORD), Health Care Financing Administration (HCFA), directs more than 300 research, evaluation, and demonstration projects. A central focus is on program expenditures as they relate to payment, coverage, eligibility, and management alternatives under Medicare and Medicaid. Study activity also examines program impact on beneficiary health status, access to services, utilization, and out-of-pocket expenditures. The behavior and economics of health care providers and the overall health care industry are also topics of investigation.

These activities are carried out by three major components—the Office of Research, the Office of Demonstrations and Evaluations, and the Office of Operations Support. The Office of Research conducts and supports data collection efforts and research on health care providers, payment approaches, beneficiary behavior, and health care utilization. The Office of Demonstrations and Evaluations funds, manages, and evaluates pilot programs that test new ways of delivering and financing Medicare and Medicaid services. The Office of Operations Support provides ORD-wide administrative direction for its research, demonstration, and evaluation projects, which includes the budget and accounting operations; grants, cooperative agreements, and contracts-award process; and publications and information resources program.

This report provides basic information on active intramural and extramural projects in a brief format. These projects are used to assess new methods and approaches for providing quality health care while containing costs, and they often provide the basis for making critical policy decisions on health care financing issues.

Projects are arranged according to ORD budget priority areas and subject categories. The synopsis on each project includes the title, project number, project period, name and address of awardee, contractor, or grantee organization, Federal project officer with primary responsibility for the project, a brief description, and the status of the project as of September 30, 1990. When a project involves research and development funds, the total funding amount for the life of the project is included. Remaining extramural projects are being conducted with waivers that permit innovations to financing and delivery of health services under the Medicare and Medicaid programs.

This is the eleventh edition of the *Status Report*. Updated editions are produced on an annual basis. The information presented should be of use to policy officials, health planners, and researchers in examining the range of research and demonstration activities that are undertaken by ORD and the implications of results and findings.

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U.S. Department of Health and Human Services
Health Care Financing Administration
Office of Research and Demonstrations
Baltimore, Maryland 21207

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Requests to be placed on our mailing list to receive notification of future publications as they become available should be sent to: Health Care Financing Administration, Office of Research and Demonstrations, Publications and Information Resources, Room 1-A-9 Oak Meadows Building, 6325 Security Boulevard, Baltimore, Maryland 21207.

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Notice to readers:

On December 13, 1989, the President signed the Bill enacting the Medicare Catastrophic Coverage Repeal Act of 1989 (Public Law 101-234). As a result, it may be necessary for the Health Care Financing Administration to discontinue implementation of those projects listed in this report that were mandated under provisions of the Medicare Catastrophic Coverage Act of 1988 (Public Law 100-360).

Quality of Care

Hospital Care

Nonintrusive Outcome Measures: Identification and Validation

Project No.: 17-C-98684/9
Period: September 1984-June 1989
Funding: $ 1,006,109
Award: Cooperative Agreement
Awardee: The RAND Corporation
1700 Main Street
Santa Monica, Calif. 90406
Project Officer: Harry L. Savitt
Division of Beneficiary Studies
Mandate: Omnibus Budget Reconciliation Act of 1986
(Public Law 99-509)

Description: The main objective of this project was to develop nonintrusive measures (administrative data) to determine the impact of selected changes in the health care sector, particularly prospective payment and diagnosis-related group methodology, on the quality of medical care. A secondary objective was to identify short-stay hospital care that may be less than adequate. In addition, medical conditions that appeared to be associated with lower levels of care were identified. A set of nonintrusive outcome indicators for quality care review was proposed. Two conditions were examined—acute myocardial infarction and congestive heart failure.

Status: Disease-specific, identified medical records have been collected and abstracted. Data entry and analysis are completed. A final report was received in late 1989.

Hospital, Market, and Peer Review Organization Factors Affecting Unnecessary Utilization and Quality of Care

Project No.: 500-88-0035
Period: September 1989-August 1990
Funding: $ 148,349
Award: Contract
Contractor: Abt Associates, Inc.
55 Wheeler Street
Cambridge, Mass. 02138
Project Officer: Paul W. Eggers
Division of Beneficiary Studies
Mandate: Social Security Amendments of 1983
(Public Law 98-21)

Description: The purpose of this study is to evaluate the effects of hospital, market, and peer review organization (PRO) characteristics on unnecessary utilization and quality of care. The study will specifically address four research questions:

- How have levels of unnecessary utilization and poor quality of care changed since the implementation of the prospective payment system (PPS)?
- What hospital and market characteristics are associated with the greatest utilization and quality problems?
- What is the relationship between hospital financial vulnerability to PPS and rates of unnecessary utilization and quality of care problems?
- How has PROs' behavior—in terms of the stringency of their denials—affected utilization rates and quality problems?

Analyses will be conducted using data bases constructed from the SuperPRO data base (N = 120,000 records) linked with Medicare provider analysis and review records to obtain charge information, and using the Health Care Financing Administration's hospital cost reports to obtain information on hospital characteristics and financial vulnerability to PPS.

Status: The contractor has completed the file construction phase and is developing predictive models. A final report is expected by December 1990.

Impact of the Prospective Payment System on the Quality of Inpatient Care

Project No.: 15-C-98663/5
Period: September 1985-January 1989
Funding: $ 275,689
Award: Cooperative Agreement
Awardee: Commission on Professional and Hospital Activities
1968 Green Road
P.O. Box 1809
Ann Arbor, Mich. 48106
Project Officer: Lawrence E. Kucken
Division of Beneficiary Studies
Mandate: Social Security Amendments of 1983
(Public Law 98-21)

Description: The purpose of this project was to evaluate the effect of the Medicare hospital prospective payment system (PPS) on the quality of inpatient care provided to Medicare patients by examining several indicators of hospital performance. This examination was based on data from the Professional Activity Study maintained by the Commission on Professional and Hospital Activity (CPHA), and supplemented by data from several other sources maintained by CPHA.

Status: The first and second year's project reports have been completed. A final project report has been submitted to the Health Care Financing Administration. The more salient findings are:

- A decline in average hospital length of stay was found to be associated with the introduction of PPS. This PPS effect was determined to be stronger when only surgical cases were considered.
- A decline in total hospital discharges was observed as a long-term trend but not as an immediate reaction to PPS. Other findings examine utilization trends over the pre- and post-PPS period including pre- and postoperative lengths of stay, use of intensive and cardiac care units, discharge destinations, and readmission rates.

Impact of the Diagnosis-Related-Group-Based Prospective Payment System on Quality of Care for Hospitalized Medicare Patients

Project No.: 18-C-98853/9
Period: September 1985-June 1990
Funding: $ 3,710,403
Award: Cooperative Agreement
Awardee: The RAND Corporation
1700 Main Street
Santa Monica, Calif. 90406
Project Officer: Harry L. Savitt
Division of Beneficiary Studies
Mandate: Social Security Amendments of 1983
(Public Law 98-21)

Description: This study is used to evaluate the impact of the prospective payment system on quality of care. It assesses the potential effects of changes in inpatient hospital treatment patterns by examining medical records and resultant health status outcomes. Quality measurement scores are being constructed for six medical conditions, before and after the introduction of prospective payment, taking into account:

- The nature, timing, and effects of medical procedures rendered.
- Disease severity.
- Comorbid conditions.

The effectiveness of medical care treatment is being evaluated by relating quality scores to mortality, readmission rates, and other outcome variables.

Status: During the first year, study areas and the number of data collectors to be assigned to each area for Texas, Pennsylvania, California, Florida, and Indiana were determined. Worksheets for all hospitals eligible for study in these States were established. Six disease categories (i.e., hip fracture, myocardial infarction, congestive heart failure, pneumonia, cerebrovascular accident, and depression) and their corresponding *International Classification of Diseases, 9th Revision, Clinical Modification* codes were identified. Six expert physician panels were convened to establish quality of care criteria for the six study diseases. Individualized project summary packages were developed and sent to each of the five participating peer review organizations. During the second year, activities centered around data abstraction, instrument development, data collector recruiting and training, and data collection. During the third year, data collection was begun. Data collection and analysis were completed during the fourth year. Changes in admission severity, sickness at discharge, process of care, and mortality are being evaluated. A final report is expected in late 1990.

Analysis of Hospital Aftercare Under Prospective Payment

Project No.: 500-86-0017
Period: April 1986-October 1989
Funding: $ 1,436,268
Award: Contract
Contractor: System Sciences, Inc.
4330 East-West Highway
Bethesda, Md. 20814
Project Officer: Lawrence E. Kucken
Division of Beneficiary Studies
Mandate: Omnibus Budget Reconciliation Act of 1986
(Public Law 99-509)

Description: The purpose of this pilot study was to develop and field test methods for determining the appropriateness of post-discharge aftercare services. Study methods involved classifying patients at the time of their discharge from the hospital according to their post-discharge service needs and applying professionally developed guidelines to project aftercare needs. Projected needs were then compared with services received based on interview data.

Status: The project methodologies and instrumentation have been completed and field tested. The final report has been received in the Office of Research and Demonstrations. Findings indicated that the data collection methods were feasible and hospital participation and interview rates were high. The validity of the aftercare guidelines was confirmed through analysis of patient adverse outcomes.

Aftercare Guideline Manual

Project No.: HCFA-90-1257
Period: September 1990-April 1991
Funding: $ 24,650
Award: Contract
Contractor: Mathematica Policy Research, Inc.
P.O. Box 2393
Princeton, N.J. 08543-2393
Project Officer: Lawrence E. Kucken
Division of Beneficiary Studies

Description: The purpose of this project is to develop an Aftercare Guideline Manual. The manual is intended to serve as a tool for hospital discharge planners and other health care professionals in formulating patient care plans covering the immediate post-hospitalization period. This manual will be based on the report aftercare guidelines developed from the "Analysis of Hospital Aftercare Under Prospective Payment," Project No. 500-86-0017.

Status: A draft outline has been developed.

Trends in Patterns of Post-Hospital Service Use and Their Impact on Outcomes

Project No.: 17-C-99009/4
Period: June 1987-August 1990
Funding: $ 293,922
Award: Cooperative Agreement
Awardee: Duke University
Demographic Studies
2117 Campus Drive
Durham, N.C. 27706

Project Officer: Lawrence E. Kucken
Division of Beneficiary Studies

Mandate: Omnibus Budget Reconciliation Act of 1986
(Public Law 99-509)

Description: This project will examine the pattern of care delivered after hospitalization for different types of hospitalized patients, as distinguished by diagnosis, age, sex, and other data elements contained on the Medicare Part A bill. Post-hospital use patterns will be examined in terms of types and duration of Medicare services received and the proportion of patients receiving care. Similar patterns will be examined for nonhospitalized Medicare beneficiaries.

Status: The final report has been prepared.

Evaluating Outcomes of Hospital Care Using Claims Data

Project No.: IR-18-HS0545
Period: July 1987-June 1992
Funding: None from the Health Care Financing Administration
Award: Grant
Grantee: Dartmouth Medical School
Hanover, N.H. 03756
Project Officer: Marshall McBean
Division of Beneficiary Studies

Mandate: Omnibus Budget Reconciliation Act of 1986
(Public Law 99-509)

Description: Support of this study of the use of claims data for evaluation of outcomes associated with surgical procedures and medical admissions has been taken over by the Agency for Health Care Policy Research. The primary goals are to:

- Maintain the New England data base of 100 percent Part A and Part B data.
- Develop additional software for small area analysis.
- Carry out research projects involving small area analysis of Veterans Administration and Health Care Financing Administration data, claims-based case-mix measurement, alternative hip fracture treatments, and coronary artery bypass surgery in northern New England.

Status: Data from the fiscal intermediaries and carriers are continuously being added to the New England data base. The software is being developed, and the research projects are in the data acquisition and development phase.

Patient-Classification Systems: An Evaluation of the State of the Art

Project No.: 17-C-99133/F
Period: July 1987-September 1990
Funding: $ 1,602,544
Award: Cooperative Agreement
Awardee: Queen's University
Kingston, Ontario Canada K6L 3N6
Project Officer: Harry L. Savitt
Division of Beneficiary Studies

Mandate: Omnibus Budget Reconciliation Act of 1986
(Public Law 99-509)

Description: This project compares the predictive power for costs and mortality of several patient classification systems. It studies computerized severity index, acute physiology and chronic health evaluation, medical illness severity grouping system, patient management categories, coded staging, and clinical staging. Project staff will abstract data from a nationally representative sample of approximately 15,000 medical records, and compare the classification systems individually and in various combinations. The utility of patient classification systems in quality of care monitoring will be studied during the next phase of the study.

Status: The project included 7,050 Medicare cases collected for the Diagnosis-Related Group Validation Study of the Department of Health and Human Services' Office of the Inspector General in a pilot study. Researchers developed microcomputer software to allow direct entry of medical record data and completed the abstraction of clinical data from the medical records. The project included analysis file construction, data analysis, validity studies, and reliability studies. Researchers simultaneously developed a larger, more representative sample from 1985 Medicare statistical files. Six peer review organizations collected data on the sample, using the project's microcomputer software. A report is expected by late 1990.

Strategies for Assessing and Assuring Quality of Care in the Medicare Program

Project No.: 17-C-99170/3
Period: September 1987-September 1990
Funding: $ 1,757,000
Award: Cooperative Agreement
Awardee: National Academy of Sciences
Institute of Medicine
2101 Constitution Avenue, NW.
Washington, D.C. 20418
Project Officer: Harry L. Savitt
Division of Beneficiary Studies

Mandate: Omnibus Budget Reconciliation Act of 1986
(Public Law 99-509)

Description: The Institute of Medicine conducted a 2-year study to design a strategy for assessing and assuring quality of care in the Medicare program. The main purpose of the study was to develop, within a committee of experts, a recommended strategy for quality review and assurance for Medicare beneficiaries.

Status: Eight committee meetings and 2 technical advisory panel meetings were held. Six background

papers were commissioned and completed. Other staff and commissioned papers were prepared as well. Eight focus groups of elderly persons were held at 4 sites. Similar focus groups with physicians were also held. Two public hearings were convened—one in San Francisco, the other in Washington, D.C. Ten site visits to health care organizations conducting quality reviews were made. A congressional briefing for key staff members was conducted in July 1989. In addition, other presentations about the study were made to the American Medical Peer Review Association, the American Medical Association, the Joint Commission on Accreditation of Health Care Organizations, the Department of Health and Human Services' Office of the Inspector General, and the Prospective Payment Assessment Commission. A final Report to Congress was delivered to the Office of Research and Demonstrations, Health Care Financing Administration, in March 1990. A dissemination conference was held in May 1990.

An Automated Data-Driven Case-Mix Adjustment System for Studies of Quality of Care

Project No.:	18-C-99069/9
Period:	June 1987-June 1990
Funding:	$ 526,948
Award:	Cooperative Agreement
Awardee:	University of California at San Francisco 3333 California Street, Suite 11 San Francisco, Calif. 94143
Project Officer:	James D. Lubitz Division of Beneficiary Studies
Mandate:	Social Security Amendments of 1983 (Public Law 98-21)

Description: The project will investigate whether predictors of patient outcome for use as control variables in studies of quality of care can be developed from readily available laboratory test information. In addition, the project will develop predictors of the outcomes of hospital care using laboratory test results that are available in computerized form at many hospitals. The outcome variable will be mortality after hospitalization. After the models are developed, they will be compared with models using variables obtainable only by labor-intensive review of medical records. Data for the project will come from the University of California at San Francisco and Stanford Hospitals and will cover the period from 1985 to 1987.

Status: Laboratory and hospital discharge data for part of the study period have been obtained and processed. Preliminary analyses have confirmed the investigators' view that the main analytical tools should be classification and regression trees. A paper has been prepared showing that laboratory data combined with diagnosis-related groups (DRGs) are a better predictor of resource use than are DRGs alone. The final report is expected in Spring 1991.

Outcome Measures for Assessment of Hospital Care

Project No.:	99-C-99169/5
Period:	September 1988-December 1989
Funding:	$ 70,134
Award:	Cooperative Agreement
Awardee:	University of Minnesota Research Center (See page 75)
Project Officer:	Paul W. Eggers Division of Beneficiary Studies
Mandate:	Omnibus Budget Reconciliation Act of 1986 (Public Law 99-509)

Description: The awardee, under this cooperative agreement, advised the Health Care Financing Administration of the most fruitful directions to follow in conducting future research on outcome measures for hospital care. Potential outcome measures, other than mortality and rehospitalization, were explored. The analysis focused on three conditions—acute myocardial infarction (AMI), hip fracture, and breast cancer.

Status: An in-depth literature review of clinical indicators was conducted by the University of Minnesota Research Center. A meeting of clinical experts was held on September 25, 1989, to obtain recommendations for future research. The panel of experts made the following general recommendations:

- Additional outcome measures should not be a priority.
- A greater need is for better quality diagnostic data on the Uniform Hospital Discharge Data Set.
- Priority should be given to further development of severity measures.
- It is highly unlikely that a generic functional status indicator that will serve the needs of such disparate diagnoses as AMI, hip fracture, and breast cancer can be developed.

A final report was received. Final revisions are being made.

Prospective Payment Beneficiary Impact Study

Funding:	Intramural
Project Director:	Paul W. Eggers Division of Beneficiary Studies
Mandate:	Social Security Amendments of 1983 (Public Law 98-21)

Description: The purpose of this study is to measure changes in hospitalization as a result of prospective payment that may affect Medicare beneficiaries.

Status: Data analyses have been performed and are included in the 1984 through 1988 Annual Reports to Congress on the *Impact of the Medicare Hospital Prospective Payment System*. Further analyses will be included in subsequent Reports to Congress. Findings from the study are:

- In 1984, discharges per 1,000 persons declined (by 4.1 percent) for the first time since the beginning of Medicare. The discharge rates declined in each of the succeeding years through 1987. From 1983 to 1987, the net decline in discharges per 1,000 was 20.8 percent.
- In 1984, average length of stay declined by 0.9 days, or 8.8 percent. Length of stay continued to decline in 1985, but at a greatly diminished rate, falling from 8.7 days to 8.4 days—a decrease of 3.9 percent. However, length of stay seems to have plateaued, remaining at 8.4 days in 1986 and actually increasing to 8.6 days in 1987. Since the beginning of the prospective payment system, the total decline in length of stay has been 10.0 percent.
- In 1984, the combination of a large decline in length of stay and the first-ever decline in discharges resulted in a 12.6 percent decline in the days-of-care rate. There were decreases in the total days-of-care rate in each of the years through 1987. The days-of-care rate for Medicare aged beneficiaries was 29 percent lower in 1987 than in 1983.
- Decreases in inpatient utilization were relatively consistent across age, sex, and race groups.

A National Program to Improve the Quality of Intensive Care Unit Services

Project No.: 18-C-99054/3
Period: January 1988-December 1990
Funding: $ 770,000 (HCFA funding)
Award: Cooperative Agreement
Awardee: George Washington University
Office of Sponsored Research
Rice Hall, 6th Floor
Washington, D.C. 20052
Project Officer: Alma B. McMillan
Division of Beneficiary Studies

Description: The project is jointly funded by the National Center for Health Services Research and Health Care Technology Assessment, the John A. Hartford Foundation, the Health Care Financing Administration, and Acute Physiology and Chronic Health Evaluation (APACHE) Systems, Inc. (a private corporation formed in part to support this research effort and to promote the distribution of APACHE-related research). The study will determine whether quality of communication and coordination among intensive care unit (ICU) nurses and physicians is a factor that can be correlated with the ICU average severity-adjusted death rate. A long-term goal of this project is to develop managerial and organizational guidelines that can be used to improve ICU quality of care. A random sample of approximately 16,000 medical records of ICU patients from about 40 hospitals will be sampled for the years 1988 and 1989. These records will be linked with Medicare administrative data for the calculation of 30-day post-ICU admission mortality rates. In addition to APACHE II scores, project staff will collect information on the organization characteristics of the hospital, including measures of ICU effectiveness, communication and coordination within the unit, and conflict resolution. These measures will then be tested for impact on APACHE severity-adjusted outcomes.

Status: This project is now in its final stage with a scheduled completion date of December 31, 1990. All data collection activities have been completed, and data files have been built from responses obtained from the various questionnaires. Site visits of selected intensive care units were completed in mid-July and summaries of the interviews were produced. A draft report on analysis of the data is being prepared and is expected by the project's completion date.

Interpreting Hospital Mortality Data: How Much Can Patient Severity and Quality of Care Explain?

Project No.: 99-C-98489/9
Period: August 1989-July 1991
Funding: $ 99,393
Award: Cooperative Agreement
Awardee: The RAND Policy Research Center
(See page 72)
Project Officer: James C. Beebe
Division of Beneficiary Studies

Description: Under this project, RAND will perform the following four tasks relating to the Medicare Mortality Predictor System (MPS):

- Investigate the statistical properties of and develop a theoretically defensible standard error estimator for the MPS rate estimator.
- Develop a Bayesian estimator for hospital mortality rates.
- Further investigate the sample design used to estimate the MPS risk-adjustment equations.
- Estimate how much of the variance in hospital mortality rates is attributable to variation in severity versus variation in quality of care.

Status: A panel of surgical consultants was convened to develop a consensus on the useful measures of operative complications and morbidity. A final report is expected in July 1991.

Evaluating Quality of Care for Hospitalized Patients

Project No.: 99-C-98526/1
Period: August 1989-November 1990
Funding: $ 100,000
Award: Cooperative Agreement
Awardee: Brandeis University Research Center
(See page 73)
Project Officer: Gerald F. Riley
Division of Beneficiary Studies

Description: The Health Care Financing Administration (HCFA) has convened expert panels to identify important adverse outcomes for eight common surgical procedures. Included as adverse outcomes are events such as hospital readmissions, infectious complications after surgery, and general complications. Although HCFA plans to compare adverse outcomes for these

surgical conditions, it has not adjusted for severity of illness at admission. This project will build on Boston University's experience at its Health Care Research Unit in developing severity of illness models. Brandeis University will develop equation-based severity models using common clinical information abstracted from charts on hospitalization to predict adverse surgical outcomes such as readmission, common surgical complications (including unplanned return to surgery), and evidence of post-surgery myocardial infarction. This work will further HCFA's ability to compare the quality of surgical cases using outcomes more sensitive than mortality with adequate severity of illness adjustments.

Status: The project has been extended through November 1990, in part because of a change in the data base used for the project. The final report is expected in November 1990.

Evaluating Quality of Care for Surgical Patients: Using Diagnosis-Related Group and Quality of Care Data for Research on Hip Patients

Project No.: 99-C-98489/9
Period: October 1989-August 1991
Funding: $ 79,975
Award: Cooperative Agreement
Awardee: The RAND Policy Research Center
(See page 72)
Project Officer: Gerald F. Riley
Division of Beneficiary Studies

Description: The Health Care Financing Administration is developing a way to use data from the Medicare provider analysis and review (MEDPAR) files to study adverse outcomes for 8 major surgical procedures, 2 of which involve the treatment of broken hips. Medical record abstracts for 2,853 hip fracture patients will be examined and compared with their MEDPAR records. The investigators will determine which characteristics present at the time of hospital admission are associated with adverse patient outcomes and the extent to which adverse outcomes are related to poor processes of care.

Status: The study is in the analysis phase. MEDPAR records are being compared with medical records to determine reasons for discrepancies between MEDPAR records and medical record abstracts.

Treatment of Peripheral Vascular Disease

Funding: Intramural
Project Director: Renee Mentnech
Division of Beneficiary Studies

Description: Decisions about the surgical management of peripheral vascular disease (PVD) attempt to balance preservation of limbs, on the one hand, and the need for recurrent surgical treatment of progressive gangrene, on the other. The ideal compromise between these two competing objectives is a single, minimally deforming surgical procedure. The need to perform a series of progressively more invasive procedures over a short period of time on the same patient can be interpreted as evidence of a surgical choice based on an inappropriately optimistic prediction of response. This study is designed to measure the frequency of multiple operations over short periods on the same patient as evidence of suboptimal surgical decisionmaking.

Status: An hierarchial model has been developed and individuals have been identified who had a new peripheral vascular insufficiency episode during 1986. The sequence of events during these new episodes of PVD has been identified and linked.

Long-Term Care

New York State Integrated Quality Assurance System for Residential Health Care Facilities: The Next Step After Case-Mix Reimbursement

Project No.: 11-C-98925/2
Period: August 1986-June 1991
Funding: $ 304,687
Award: Cooperative Agreement
Awardee: New York State Department of Social Services
40 North Pearl Street
Albany, N.Y. 12243
Project Officer: Marvin A. Feuerberg
Division of Long-Term Care Experimentation

Description: The objectives of the New York State Quality Assurance System (NYQAS) are to link data from the case-mix reimbursement system for use in the quality assurance system and to integrate the quality assurance processes of survey and certification, inspection of care, and utilization review. The State implemented a case-mix payment system for residential health care facilities for which all patients are assessed at least biannually. The resulting data on patient characteristics are audited and entered on a client-specific data base that can be used to target quality assurance activities toward facilities that have:

- Staffing patterns that seem inappropriate to the needs of patients.
- Excessive numbers of patients with clinical outcomes that indicate possible deficiencies in the quality of care.
- Unexpected negative outcomes from one review to the next.

Researchers will integrate external outcome standards, survey and certification, inspection of care, and utilization review activities into a single, patient-centered process. The use of the case-mix data base will serve to focus reviewer energies on problem facilities. The ability to routinely track significant or potentially significant deteriorations in patient care will trigger off-cycle surveys. Facilities identified as having few or no problems will be targeted for abbreviated surveys.

Status: During the first and second years of the project, the State completed the NYQAS design. The State also designed a training program on the use of the new protocols and procedures for State surveyors. The

training began in October 1988, and NYQAS was implemented in November 1988. Administrative waivers permit sampling of resident review (as opposed to a 100-percent review), a survey cycle that averages 12 months (as opposed to a cycle of 12 months for all homes), and the alignment of utilization review with case-mix assessment intervals.

New York State Quality Assurance System Evaluation

Project No.: 500-87-0030
Period: October 1989-September 1991
Funding: $ 349,477
Award: Technical Support: Evaluation of Demonstrations
(See page 76)
Contractor: Abt Associates, Inc.
55 Wheeler Street
Cambridge, Mass. 02138-1168
Project Officer: Marvin A. Feuerberg
Division of Long-Term Care Experimentation

Description: The objectives of the New York State Quality Assurance System (NYQAS) are to link data from the case-mix reimbursement system for use in the quality assurance system and to integrate the quality assurance processes of survey and certification, inspection of care, and utilization review. The purpose of the evaluation is to determine which aspects of NYQAS are effective and which are not, and why. Researchers hope that this information will improve the implementation and monitoring of the multi-State Nursing Home Case-Mix and Quality Demonstrations, the nursing home reform provisions of the Omnibus Budget Reconciliation Act of 1987, and the surveillance of nursing homes in general. Consistent with these objectives, the evaluation will employ a variety of qualitative and quantitative methods to assess NYQAS' reliability and validity of problem identification, monitoring, and enforcement, and the impact of NYQAS on the quality of care.

Status: This project is in the early developmental stage.

Impact of the Prospective Payment System on the Quality of Long-Term Care in Nursing Homes and Home Health Agencies

Project No.: 17-C-98971/8
Period: August 1986-November 1989
Funding: $ 608,553 (Phase I)
$ 234,542 (Phase II)
Award: Cooperative Agreement
Awardee: University of Colorado
1355 South Colorado Boulevard, Suite 706
Denver, Colo. 80222
Project Officers: Marni J. Hall (Phase I)
Phyllis A. Nagy (Phase II)
Division of Long-Term Care Experimentation

Description: Phase I of this study examined patient-level process indicators of quality of care provided to skilled nursing facility (SNF) and home health patients before and after implementation of the Medicare inpatient hospital prospective payment system (PPS). It also assessed pre- and post-PPS differences in patient care practices and outcomes as reported by physicians and nurses, and the number and types of acute care beds recently converted to SNF beds (transition beds). This study was expanded in September 1988 (Phase II) to conduct research mandated by the Medicare Catastrophic Coverage Act of 1988 relating to the quality of long-term care services in community-based and custodial settings, and the effects of the provision of long-term care services on reducing expenditures for acute health care services. Phase II includes the development of recommendations for additional research in these areas.

Status: Findings from Phase I were incorporated into a July 1987 report entitled "Findings on Case Mix and Quality of Care in Nursing Homes and Home Health Agencies." This report is available from the National Technical Information Service (NTIS), accession number PB88-100623. Analyses of the pre- and post-PPS time periods indicated that the level of quality of care provided prior to the implementation of PPS has generally been maintained. Under Phase II, three reports have been prepared: "Future Research on the Quality of Long-Term Care Services in Community-Based and Custodial Settings"; "State Survey of Community-Based Care Systems"; and "Future Research on the Relationship Between Long-Term Care Services and Reduced Acute Care Expenditures." These reports are expected to be available from NTIS by December 1990.

Study of Long-Term Care Quality and Nursing Homes

Project No.: 18-C-98417/8
Period: September 1983-September 1986
Funding: $ 808,176
Award: Cooperative Agreement
Awardee: University of Colorado
Health Sciences Center
4200 East 9th Avenue, C-421
Denver, Colo. 80262
Project Officer: Dennis M. Nugent
Division of Long-Term Care Experimentation

Description: The purpose of evaluating the Robert Wood Johnson Foundation's (RWJF) Teaching Nursing Home Program (TNHP) was to assess the impact of nursing school and nursing home affiliations on patient outcomes and costs of patient care. Eleven university-based schools of nursing were funded to establish clinical affiliations with 1 or 2 nursing homes. Objectives of the study included assessing the extent to which the TNHP approach reduces hospitalizations and emergency room use, examining whether the length of nursing home stays is reduced and discharges into independent living environments are increased, and determining the program's effect on the health status

and functioning of the patient. In addition to utilization and patient impacts, a cost-benefit analysis was conducted. The evaluation of this program was sponsored jointly by the Health Care Financing Administration and RWJF. (RWJF funded the evaluation from October 1986 to December 1988.) A supplement to the study was funded in June 1986 to assess whether services provided to specific types of patients differed in teaching nursing homes relative to a group of comparison nursing homes. Seven problem areas were profiled—urinary incontinence and urinary catheter, pressure sores, terminal illness, confusion, falls, diabetes, and use of sedatives.

Status: The evaluation showed a decrease in hospitalization rates for teaching nursing home patients compared with all nursing home patients throughout the country. Differences in hospitalization rates were even greater after adjusting for case mix or risk factors. The decline was more pronounced for short-stay and Medicare patients. Teaching nursing home patients had better patient status outcomes and were less likely to experience functional problems with activities of daily living. They were also less likely to be catheterized, restrained, or heavily sedated. Nurse clinicians and nurses' aides were more involved in care planning in teaching nursing homes than they were in comparison nursing homes which may have enhanced the establishment of preventive strategies. The project's final report will soon be available from the National Technical Information Service.

The Multi-State Nursing Home Case-Mix and Quality Demonstration

Project Nos.:	Kansas, 11-C-99366/7 Maine, 11-C-99363/1 Mississippi, 11-C-99362/4 South Dakota, 11-C-99367/8
Period:	June 1989-June 1993
Funding:	$ 931,755
Award:	Cooperative Agreements
Awardees:	State Medicaid Agencies
Project Officer:	Elizabeth S. Cornelius Division of Long-Term Care Experimentation

Description: This project builds on past and current initiatives with case-mix payment and quality assurance. The 5-year demonstration will design, implement, and evaluate a combined Medicare and Medicaid system in 4 States—Kansas, Maine, Mississippi, and South Dakota. The purpose of the demonstration is to test a resident information system with variables for classifying residents into homogeneous resource utilization groups for equitable payment and for quality monitoring of outcomes adjusted for case mix. The new minimum data set (MDS) for resident assessment will be used for both payment classification and quality monitoring systems. This information will be computerized, audited, and submitted as part of the billing documentation. It will be used to develop case-mix adjusted outcome and process norms across the demonstration States. This system will be used to trigger early quality reviews by State staff and to provide the regular survey teams with information on potential problems in nursing facilities. The project consists of 3 phases—systems development and design, systems implementation and monitoring, and evaluation. There will be 2 years of developmental work before the Medicare/Medicaid classification and payment system will be ready for implementation in the demonstration States.

Status: The project has completed collecting research data on 5,000 nursing facility residents and has conducted a field test of the MDS. The average direct-care staff time across the States is 108 minutes. Analysis of the data to develop the new multi-State Medicare/Medicaid resource index is under way. The States implemented the MDS plus statewide in October 1990 with the approval of the Health Standards and Quality Bureau. In collaboration with The Circle, Inc., and the University of Wisconsin, the States are beginning data analysis of service utilization and outcomes. The demonstrations should begin implementing the new payment system in October 1991.

Multi-State Case-Mix Payment and Quality Demonstration

Project No.:	95-C-99540/2
Period:	May 1990-April 1992
Funding:	$ 661,613
Award:	Cooperative Agreement
Awardee:	New York State Department of Health Room 1683 Corning Tower Albany, N.Y. 12237
Project Officer:	Elizabeth S. Cornelius Division of Long-Term Care Experimentation

Description: New York State proposes to participate in the multi-State—Kansas, Maine, Mississippi, and South Dakota—nursing home case-mix and quality demonstration, presently in its initial phase. That demonstration uses case-mix systems for both Medicare and Medicaid that are based on the resource utilization groups (RUGs) developed in the Health Care Financing Administration (HCFA)-sponsored studies in New York and Texas. The objective of the demonstration is to test the feasibility and cost effectiveness of a case-mix payment system for nursing facility services under Medicare and Medicaid. The 4 States participating are largely rural and have no previous experience using case-mix systems.

The addition of New York to the demonstration will enhance HCFA's ability to use results from the initiative nationally. New York represents a heavily regulated, northern industrialized area with larger, high-cost nursing facilities that are medically sophisticated and highly skilled. Sixteen percent of the national Medicare skilled nursing facility days are incurred in New York State. New York is uniquely suited for inclusion in this demonstration since it has already implemented a complementary system for its Medicaid nursing facility payment program. New York has done extensive work

on case mix, including its involvement in the University of Michigan and Rensselaer Polytechnic Institute's development of the RUG-T18 system under the aforementioned HCFA-sponsored project.

Status: Project staff are conducting the first data collection in 25 facilities, using the national minimum data set, which was field tested in the other States last Spring. These will be added to the data base being analyzed to develop the new Medicare/Medicaid classification system. The Project Director was hired in September 1990.

Long-Term Care Case-Mix and Quality Technical Design Project

Project No.: 500-89-0046
Period: September 1989-September 1991
Funding: $ 997,887
Award: Contract
Contractor: The Circle, Inc.
8201 Greensboro Drive, Suite 600
McLean, Va. 22102
Project Officer: Elizabeth S. Cornelius
Division of Long-Term Care Experimentation

Description: This 2-year contract will support the design and early implementation phase of the multi-State Nursing Home Case-Mix and Quality Demonstration. The first step was to refine the data collection process creating consistent, reliable, and valid measurements of resident characteristics and use of staff time across the 4 demonstration States—Kansas, Maine, Mississippi, and South Dakota. The national minimum data set (MDS) was chosen for this purpose and the first data collection was a major field test of the MDS elements. The demonstration will involve approximately 50,000 residents in 800 facilities at any one time. The second step will be to refine a resource utilization group classification system that will apply to both Medicare and Medicaid residents in nursing facilities across the 4 States. This system will account for more than 42 percent of the staff time variance in each of the several States. It must have natural breaks in the groups between residents who are expected to be short stayers and those expected to be long stayers and between residents requiring heavy technical nursing and those with less technical needs. A prospective case-mix payment system to be used across the States for Medicare-covered stays will be developed using the common classification system. In addition, analyses comparing outcomes under different circumstances will be conducted. A national advisory group was tasked to recommend the outcomes that are most promising for use in a quality monitoring system and to assist in designing the quality monitoring system to be used during the operation phase of the demonstration.

Status: The project has been staffed and the first data collection completed. Researchers from Rensselaer Polytechnic Institute, the University of Michigan, the University of Wisconsin, and Duke University are analyzing the data to develop the classification system and to study the utilization patterns and outcomes. The classification is expected to be completed by February 1991. The Medicare payment system is expected to be available in late Spring, and the States will implement the new payment system in October 1991.

Psychoactive Drug Use Among Nursing Home Elderly

Project No.: 99-C-99169/5
Period: September 1989-May 1990
Funding: $ 97,600
Award: Cooperative Agreement
Awardee: University of Minnesota Research Center
(See page 75)
Project Officer: Dana B. Burley
Division of Long-Term Care Experimentation

Description: This study examined the extent of regular and "prn," or "as needed," psychoactive drug use among nursing home elderly and the possibility of appropriate and inappropriate use of such drugs in terms of the characteristics of nursing home residents and nursing homes. Researchers used existing, secondary-source data from 2 previous research studies for the analyses. The studies involved a retrospective review of the records of 8,000 randomly selected individuals residing in nursing homes from 1980 to 1987.

Status: Researchers found that:

- Although the level of use for each class of drug tested was the same among the residents cohort and the new admissions cohort, different people comprised the user groups.
- There was a considerable change in the number of new admissions and residents who were either discontinued or initiated on the drugs following entrance to nursing homes.
- Applying the criteria based on the guidelines for antipsychotic drugs and for unnecessary drugs, half of the neuroleptic users in both admissions and residents cohorts lacked a specific condition or diagnosis that would make such use eligible under these guidelines. Seventy-five percent of the antidepressant users had no documented diagnosis of depression.

Development of Outcome-Based Quality Measures for Home Health Services

Project No.: 500-88-0054
Period: September 1988-December 1992
Funding: $ 1,965,389
Award: Contract
Contractor: Center for Health Policy Research
1355 South Colorado Boulevard
Denver, Colo. 80222
Project Officer: Tony F. Hausner
Division of Long-Term Care Experimentation

Description: The purpose of this contract is to develop and test outcome-based measures or indicators of quality for Medicare home health services. The measures are to be reliable and valid for use in monitoring and comparing quality of home health care across agencies, recognizing possible confounding factors such as case mix. Colorado has developed a set of quality indicator groups that it hopes to test in this study. The contractor will consider a broad range of possible outcome measures including health and functional status measures. Project staff will test outcome measures that are linked to specific diagnostic conditions and/or services and will test broad-based measures that are not so linked. They will also test measures that are more precise in the information provided and others that are more practical and less costly to administer. The key criteria for the selection of measures include feasibility, reliability, validity, difficulty in "gaming" the measures, impact on quality, access, and cost and burden of data collection to the Health Care Financing Administration and home health agencies.

Status: The contract was awarded in September 1988. The contractor has completed literature reviews, a concept paper, a design report, and an Office of Management and Budget reports clearance package. Data collection began in early 1990. The Robert Wood Johnson Foundation (RWJF) has awarded a grant to the Center for Health Policy Research which complements this contract. The RWJF grant focuses on adult non-Medicare home care services and populations and uses clinical panels to identify quality measures.

The Use of Medicaid Reimbursement Data in the Nursing Home Quality Assurance Process

Project No.: 18-C-99256/5
Period: June 1988-August 1991
Funding: $ 487,556
Award: Cooperative Agreement
Awardee: Center for Health Systems Research and Analysis
University of Wisconsin-Madison
Room 300 Infirmary
1300 University Avenue
Madison, Wis. 53706
Project Officer: Elizabeth S. Cornelius
Division of Long-Term Care Experimentation

Description: The purpose of this project is to assess the feasibility of using Medicaid reimbursement data to target facilities and residents in the nursing home quality assurance survey process. Medicaid reimbursement data appear to hold considerable promise in helping to target facilities for more intensive review, identifying specific areas of deficient care, and identifying individual residents for more detailed review. Information on medication use, sentinel health events, and other indicators can be provided to surveyors in preparation for the field survey. The information can also be used to determine whether problems have recurred after the survey and followup visits. The objectives of the project are to:

- Convert reimbursement data into specific quality of care indicators (QCIs), particularly with respect to drug-related measures and medical outcomes.
- Identify in the Federal regulations the conditions, standards, and elements for which the use of QCIs has the greatest potential benefit.
- Develop and demonstrate in 1 State (Wisconsin) procedures for providing QCIs to survey staffs.
- Assess the potential for implementing the system in other States.
- Determine the implications of the proposed Health Care Financing Administration nursing home regulations and the 1987 Omnibus Budget Reconciliation Act provisions for using reimbursement data in the quality assurance process.
- Design an expanded demonstration of the use of QCIs in the survey process.

Status: Forty preliminary QCIs have been developed and reviewed by the project staff and the advisory panel. The QCIs have been linked to specific conditions, standards, and elements within existing Federal regulations. The new regulations (published in February 1989 but not yet implemented) have been reviewed to determine their relationship with the QCIs. The link between the 1989 regulations and the QCIs is closer than that between the old regulations and the QCIs. Deficiencies and QCIs in Wisconsin for the period August 1987 to August 1988 are being analyzed to determine the baseline relationship between the 2 measures. The system for conveying QCI information to the surveyors in a systematic way has been developed and tested with the help of the Wisconsin Division of Health. Finally, a survey of State Medicaid reimbursement and quality assurance officials has been completed to identify which States may hold the greatest potential for the use of Medicaid data in the survey process. The survey indicates that at least 40 States could use this source of information to inform their State survey teams. The demonstration will be conducted in approximately 100 facilities beginning in 1991. Three States—Maine, Mississippi, and South Dakota—have been determined to have the data available to use the developed QCIs and are setting up files for study purposes.

Utility of Medicaid Claims Data for Deriving Nursing Home Quality Indicators

Project No.: 18-C-99388/9
Period: May 1990-July 1991
Funding: $ 302,311
Award: Cooperative Agreement
Awardee: SysteMetrics/McGraw-Hill
104 West Anapama Street
Santa Barbara, Calif. 93101
Project Officer: Marvin A. Feuerberg
Division of Long-Term Care Experimentation

Description: The goal of this project is to investigate the usefulness of claims data from Medicaid and Medicare administrative record systems as sources of nursing home patient treatment and outcome measures. The study will involve retrospective analysis of 1987 Medicaid and Medicare claims data and facility deficiency data from 4 States—California, Georgia, Michigan, and Tennessee. Currently, the only nationwide assessment of the quality of nursing homes consists of summaries of survey deficiencies. Previous research has indicated that deficiency data should be used with caution since the levels and types of citations vary widely both across and within States. The innovative element of this study is the identification, using routinely collected claims data, of sentinel health events that are diagnosis codes for which hospitalization represents an adverse patient outcome of nursing home care. This study will examine the relationship among staffing levels, treatment patterns, and patient outcomes.

Status: This project is in the early developmental stage.

Study of Home Health Care Quality and Cost Under Capitated and Fee-For-Service Payment Systems

Project No.: 17-C-99051/8
Period: June 1987-June 1992
Funding: $ 1,683,773
Award: Cooperative Agreement
Awardee: Center for Health Policy Research
1355 South Colorado Boulevard
Denver, Colo. 80222
Project Officer: Margaret A. Coopey
Division of Long-Term Care Experimentation

Description: This project is designed to evaluate service utilization, quality, and cost of Medicare home health care provided under capitated and noncapitated (fee-for-service) payment systems. The Center for Health Policy Research will collect patient-level, case-mix, and service use data on a sample of approximately 4,000 patients from 44 agencies nationwide. A random and stratified patient sample will be drawn from both fee-for-service and capitated payment environments to assess and compare cost effectiveness of care, quality of care, and incentives to admit and provide care in the 2 payment environments. Secondary data analysis will also be completed on a sample of 10,000 Medicare beneficiaries using Medicare claims data to compare service use patterns among posthospital Medicare patients discharged to skilled nursing facilities, home health care facilities, and the community, as well as Medicare home health patients admitted from the community.

Status: Recruitment of home health agencies, staff training, and primary data collection are under way. Secondary data are being analyzed. Several interim reports of the results of various preliminary analyses will be prepared during 1991.

Home Care Quality Studies

Project No.: 500-89-0056
Period: October 1989-March 1993
Funding: $ 2,642,445
Award: Contract
Contractor: University of Minnesota
School of Public Health
Box 197, 420 Delaware Street, SE.
Minneapolis, Minn. 55455
Project Officer: Phyllis A. Nagy
Division of Long-Term Care Experimentation

Description: This study will carry out research on the following topics:

- Quality of long-term care services in community-based and custodial settings.
- Effectiveness of (and need for) State and Federal consumer protections that assure adequate access to and protect the rights of Medicare beneficiaries who are provided long-term care services other than in a nursing facility.

The project will focus on in-home care, examining traditional home health services that are reimbursed by Medicare and Medicaid as well as personal care and supportive services which have more recently been covered by Federal and State sources of funding. Key project tasks include:

- Development of a taxonomy clarifying the various objectives and goals ascribed to home and community-based care from the various perspectives of consumers, payers, and care providers.
- Development and feasibility-testing of a survey design that would measure the extent of, need for, and adequacy of home care services for the elderly.
- A study of variations in labor supply and related effect(s) on home care quality, as well as factors that contribute to these variations.
- Recommendations to improve the quality of home and community-based services by identifying best practices and promising quality assurance approaches.

Status: The University of Minnesota is continuing work on each of these identified primary tasks. The final progress report for this contract is expected in March 1993. With the repeal of the Medicare Catastrophic Coverage Act of 1988, this project is no longer congressionally mandated.

Other Studies

Medicaid Quality of Care Study

Project No.: 500-88-0044
Period: June 1988-December 1991
Funding: $ 3,714,471
Award: Contract
Contractor: SysteMetrics/McGraw-Hill
104 West Anapamu Street
Santa Barbara, Calif. 93101

Project Officer: Thomas W. Reilly
Division of Program Studies

Mandate: Omnibus Budget Reconciliation Act of 1986
(Public Law 99-509)

Description: Under Section 9432(c) of Public Law 99-509, the Department of Health and Human Services is required to report to Congress on a study that examines the appropriateness, necessity, and effectiveness of selected medical treatments and surgical procedures for Medicaid patients. The study must analyze the extent of variation that exists in the rate of performance of these treatments and procedures on Medicaid beneficiaries for small areas within States and among States. The study must also identify underutilized, medically necessary treatments and procedures for which failure to furnish could have an adverse effect on health status, and for which the rate of use by Medicaid beneficiaries is significantly less than the rate for comparable, age-adjusted populations. The Medicare Catastrophic Coverage Act of 1988 subsequently modified the mandate so that the study is being conducted in two phases. The first phase will include an analysis of geographic variation in utilization. An interim report is due to Congress in 1990. The second phase will deal with the remaining issues of appropriateness, necessity, and effectiveness. The final report is due to Congress on January 1, 1992.

Status: Analysis of Phase I variations results is near completion. Analysis plans for Phase II are currently under way.

Clinical Homogeneity of Severity of Illness Measures

Project No.: 99-C-98526/1
Period: August 1990-July 1991
Funding: $ 50,000
Award: Cooperative Agreement
Awardee: Brandeis University Research Center
(See page 73)
Project Officer: Harry L. Savitt
Division of Beneficiary Studies

Description: This project was designed to test whether abstract-based and Uniform Hospital Discharge Data Set-based severity systems define clinically homogeneous patient groups, and, if not, which types of cases are misclassified. Myocardial infarction cases will be studied using the Yale University-refined diagnosis-related groups, the Medicare mortality predictor system, and the medical illness severity grouping system. Physicians will review patient charts and will classify the degree of severity for each case. Comparisons will be made between the physicians' clinical evaluation of severity and data gathered from the computerized systems.

Status: A revised project proposal is expected in November 1990, after which rating and abstraction instruments will be developed.

Option Paper on Collection of Health Status Information on Consecutive Cohorts of Medicare Beneficiaries

Project No.: 99-C-99168/3
Period: September 1988-March 1989
Funding: $ 115,609
Award: Cooperative Agreement
Awardee: Project HOPE Research Center
(See page 74)
Project Officer: Marshall McBean
Division of Beneficiary Studies

Description: The purpose of this project was to explore the feasibility of collecting data on the health status of beneficiaries as they become entitled to Medicare at 65 years of age. The resulting data collection is known as the Medicare Beneficiary Health Status Registry (MBHSR). Researchers from this project studied the feasibility of collecting data on changes in the health status of beneficiaries over time. They also assessed the feasibility of undertaking a demonstration to evaluate the impact of health risk assessment on beneficiary health and Medicare use.

Status: This project is completed. Project HOPE staff and consultants designed prototype studies to demonstrate how MBHSR data can be used to answer questions of effectiveness of the Medicare program or medical practice. This information was used to develop a request for contract for the design and field testing of the MBHSR. Development of this registry was strongly endorsed by the Institute of Medicine's panel designing research agendas for Medicare in the areas of breast cancer and hip fracture.

Development of Ambulatory Surgery Quality of Care Measures and Monitoring Strategy

Project No.: 99-C-98526/1
Period: August 1988-July 1990
Funding: $ 40,000
Award: Cooperative Agreement
Awardee: Brandeis University Research Center
(See page 73)
Project Officer: Sheldon Weisgrau
Division of Hospital Experimentation

Mandate: Omnibus Budget Reconciliation Act of 1986
(Public Law 99-509)

Description: The goal of this project was to produce a conceptual report addressing approaches for measuring the quality of ambulatory surgery. This research was to provide the Health Care Financing Administration (HCFA) with information concerning options, strategies, and approaches in the development and use of ambulatory surgery quality of care indicators and the data needed to measure and monitor these criteria.

Status: A literature review and a draft interim conceptual paper discussing various approaches and problems in the measurement of quality of care were

submitted to HCFA. However, because of other priorities and the complexity of the task, the project subsequently was discontinued.

Medicare Provider Analysis and Review Validation Study

Funding: Intramural
Project Director: Lawrence E. Kucken
Division of Beneficiary Studies

Description: The purpose of this study is to provide information useful in validating data (primarily the Uniform Hospital Discharge Data Set) contained on the Medicare provider analysis and review (MEDPAR) file. Data validation will be based on a comparison between MEDPAR data and peer review organization-generated data. The study will concentrate on data elements of interest for research studies where data validity is critical; e.g., the *International Classification of Diseases, 9th Revision, Clinical Modification* codes for cardiac revascularization procedures. The study will also isolate factors associated with data validity problems such as provider and geographic characteristics.

Status: This study is in the file construction and data preparation phase.

Physician and Ambulatory Care Payment Systems

Physician Utilization, Intensity, and Coding Issues

Multiple Hospital Visits

Project No.: 99-C-98489/9
Period: August 1990-December 1991
Funding: $ 61,440
Award: Cooperative Agreement
Awardee: The RAND Policy Research Center
(See page 72)
Project Officer: Benson L. Dutton
Division of Reimbursement and Economic Studies

Description: The purpose of this study is to examine:

- The relationship of the number and intensity of physicians' hospital visits to the characteristics of the hospital stay.
- How the number and intensity of physicians' hospital visits relate to the characteristics of the physician (e.g., specialty, regional practice patterns, participation and assignment status, and attending status).
- Trends over time in intensity and frequency of hospital visits by carrier and within specialties.

Status: The analysis for this project consists of two parts. The first and most substantial part of the analysis examined the determinants of the frequency and intensity of hospital visits. The second part of the analysis examined individual physician hospital visit patterns by linking provider data from the Part B Medicare Annual Data procedure file with data from the Medicare provider analysis and review file. During Summer 1990, major findings for this study were presented in briefings at RAND and at the Health Care Financing Administration. A draft report setting forth the findings of this project is expected in Fall 1990.

Assistants at Surgery: Variation in Use

Project No.: 99-C-98489/9
Period: May 1988-November 1989
Funding: $ 54,193
Award: Cooperative Agreement
Awardee: The RAND Policy Research Center
(See page 72)
Project Officer: Benson L. Dutton
Division of Reimbursement and Economic Studies

Description: In fiscal year 1989, Medicare payments for assistants at surgery were about $350 million. The Health Care Financing Administration has placed limits on paying for assistants at surgery only in cases where teaching hospitals and cataract surgery are involved. Under this project, RAND has studied the use of assistants at surgery from data gathered for 1984, 1985, and 1986. For a number of key procedures, RAND has analyzed how much variation in the use of assistants at surgery is explained by patient, hospital, and surgeon characteristics and by geographic region.

Status: This project is completed. The final report, "Determinants of the Use of Assistants at Surgery," accession number PB90-246646, is available from the National Technical Information Service.

Analysis of Medical Visit Data

Project No.: 99-C-98526/1
Period: July 1990-July 1991
Funding: $ 99,907
Award: Cooperative Agreement
Awardee: Brandeis University Research Center
(See page 73)
Project Officer: Jesse M. Levy
Division of Reimbursement and Economic Studies
Mandate: Omnibus Budget Reconciliation Act of 1989
(Public Law 101-239)

Description: Although the definitions of surgical procedures are clearly understood by nearly all physicians, there is considerable variation in what is meant by the codes for visits and consultations. This project will examine the issue of duration of visits and will investigate how data on the duration of visits could be used in defining visit codes for Medicare reimbursement. Specifically, Brandeis University will produce a conceptual paper on alternative methods of defining visits; analyze various survey data sources to

determine the factors that explain variations in visit lengths; and examine time trends in visit lengths.

Status: This project is in the early developmental stage.

Medical Visit Coding

Project No.: 99-C-98489/9
Period: August 1989-July 1991
Funding: $ 30,000
Award: Cooperative Agreement
Awardee: The RAND Policy Research Center
(See page 72)
Project Officer: Benson L. Dutton
Division of Reimbursement and Economic Studies

Description: The primary objective of this study is to describe the variation in intensity of medical visits and to evaluate the impact of alternative ways for coding medical visits. The descriptive analysis examined the impact of five factors on variations in the coding of intensity level for medical visits at the carrier level. They are relative prices by carriers across visit codes, billing practices, specialty mix, frequency of visits, and individual physician practice patterns. In addition, RAND evaluated the potential impact of alternative coding schemes on Medicare payments and physicians, including measures of time and/or collapsed versions of the current coding system for medical visits.

Status: All empirical analyses and simulations have been completed. The results were presented in a briefing to the Health Care Financing Administration staff. RAND is preparing a draft paper documenting the results.

Study of Volume Performance Standard Rates of Increase by Geography, Specialty, and Type of Service

Funding: Intramural
Project Director: C. McKeen Cowles
Division of Reimbursement and Economic Studies
Mandate: Omnibus Budget Reconciliation Act of 1989
(Public Law 101-239)

Description: Section 6102(d)(3) of Public Law 101-239 requires a study of the feasibility of establishing separate performance standard rates of increase for physician services under the new Section 1848(f) of the Social Security Act, which established a Medicare Fee Schedule.

Status: A draft final report was received in the Office of Research and Demonstrations and is being reviewed.

Analysis of Group-Specific Volume Performance Standards

Project No.: 99-C-98526/1
Period: August 1990-July 1991
Funding: $ 148,308
Award: Cooperative Agreement
Awardee: Brandeis University Research Center
(See page 73)
Project Officer: C. McKeen Cowles
Division of Reimbursement and Economic Studies
Mandate: Omnibus Budget Reconciliation Act of 1989
(Public Law 101-239)

Description: Using the Part B Medicare Annual Data procedure and beneficiary files, this project will provide descriptive statistics on group practice volumes and beneficiary utilization patterns. Such descriptive statistics will provide information on how Medicare volume performance standard groups might be defined and on how these groups' performances could or should be measured. For example, the analysis will establish a group minimum size and identify potential interactive effects across physician groups.

Status: This project is in the early developmental stage.

New Patient Visit Codes

Project No.: 99-C-98526/1
Period: August 1990-July 1991
Funding: $ 102,260
Award: Cooperative Agreement
Awardee: Brandeis University Research Center
(See page 73)
Project Officer: C. McKeen Cowles
Division of Reimbursement and Economic Studies
Mandate: Omnibus Budget Reconciliation Act of 1989
(Public Law 101-239)

Description: Physicians may choose among a large number of codes for medical visits. For a number of reasons (e.g., administrative simplicity and less opportunity for "gaming"), it may be preferable to have as few codes as possible in a physician payment system. This project will provide a descriptive analysis of the current use of new patient visit codes. Average allowed charges and prevailing charges for new and established patient codes for the different levels of service will be compared. Redistributive effects of eliminating the new patient code distinction will be estimated.

Status: This project is in the early developmental stage.

Growth in Physician Services

Project No.: 500-89-0053
Period: September 1989-October 1990
Funding: $ 292,155
Award: Contract
Contractor: Actuarial Research Corporation
6928 Little River Turnpike
Annandale, Va. 22003

Project Officer: Nancy T. McCall
Division of Reimbursement and Economic Studies

Description: The purpose of this contract was to study the growth in physician services from 1986 through 1988 and to identify significant physician expenditure patterns and trends. Areas specifically studied were national and local trends associated with high-volume office and hospital visits, surgical procedures, and diagnostic and laboratory tests.

Status: The 1986-88 Medicare Annual Data procedure file was used as the primary data base for the analyses. A preliminary analysis of this file was undertaken to study how utilization per provider number, service intensity, and price changed by locality, specialty of the physician, and place of service. A draft final report was received in the Office of Research and Demonstrations in September 1990.

Out-of-Pocket Costs of Medicare Beneficiaries for Physician Services

Funding: Intramural
Project Director: Robert L. Gruber
Division of Reimbursement and Economic Studies
Mandate: Omnibus Budget Reconciliation Act of 1987
(Public Law 100-203)

Description: Section 4056(c)(3) of Public Law 100-203 directs the Secretary of Health and Human Services to report to Congress on Medicare beneficiary liability and expenditures, including out-of-pocket costs, and the extent to which physicians collect such beneficiary liabilities, including unassigned claims (balance billings) and the required coinsurance.

Status: A draft final report was received in the Office of Research and Demonstrations and is currently being reviewed.

Concurrent Care During Surgery

Project No.: 99-C-98526/1
Period: August 1989-July 1991
Funding: $ 76,567
Award: Cooperative Agreement
Awardee: Brandeis University Research Center
(See page 73)
Project Officer: Michael Borowitz
Division of Reimbursement and Economic Studies

Description: This project is designed to investigate the appropriateness of inpatient physician consultations and concurrent care under Medicare. The investigators will isolate 5-10 medical and surgical diagnosis-related groups with high rates of consultation and concurrent care from which clinically coherent clusters of diagnoses and services will be defined. From these clusters, they will examine consultation patterns associated with diagnoses. In addition, the investigators will develop alternative criteria for evaluating the appropriateness of consultation and concurrent care. The study will be an initial step toward developing a screening procedure for isolating inappropriate cases of consultation and concurrent care.

Status: This project is near completion.

Concurrent Care During Surgical Admissions

Project No.: 99-C-98489/9
Period: August 1989-July 1991
Funding: $ 25,000
Award: Cooperative Agreement
Awardee: The RAND Policy Research Center
(See page 72)
Project Officer: Benson L. Dutton
Division of Reimbursement and Economic Studies

Description: The three major objectives of this project are to provide descriptive statistics documenting variations in the number of visits and consultations by non-attending physicians (i.e., other than the attending surgeon), by hospital group, and by carrier for Medicare surgical admissions; examine the effect of concurrent conditions on the number of visits and consultations by non-attending physicians; and identify and determine the frequency of patterns of concurrent care that may be clinically inappropriate.

Status: The following analytic tasks are being completed:

- Impact of area differences in global fees on the allowed charges for followup care.
- Changes in the allowed charges for followup care in inpatient and outpatient settings.
- Impact of coexisting conditions on the amount of allowed charges for followup care.

A final report is expected in November 1990.

Controlling Physician Expenditures in a Hospital Setting: Medical Staff Expenditure Targets

Project No.: 17-C-99489/3
Period: September 1989-September 1991
Funding: $ 557,862
Award: Cooperative Agreement
Awardee: The Urban Institute
Health Policy Center
2100 M Street, NW.
Washington, D.C. 20037
Project Officer: C. McKeen Cowles
Division of Reimbursement and Economic Studies

Description: The aim of this project is to study expenditure growth targets for hospital medical staffs as an alternative physician payment method that would provide incentives for physicians to contain costs of services delivered in the hospital setting. The primary study objective is to identify the distributional effects of

a prospective per-case method of payment for physician services in the hospital setting, i.e., both inpatient services and outpatient surgery. The inpatient payment component will be based on the average physician charge for a diagnosis-related group (DRG), and the outpatient payment component will be based on the average physician charge for a surgical code. Although this study draws on previous research, it differs from earlier work by using a national data set and post-prospective payment system implementation data and by incorporating outpatient surgery. Results could provide useful information about how a medical staff payment model might be implemented within a physician payment system based on volume performance standards. A medical staff risk pool is small enough for physicians to have strong incentives to control costs and unnecessary utilization. The period of performance is 2 years.

Status: A 1987 analytic file has been created and methodologically equivalent files are being created for 1986 and 1988. Average physician charges for each DRG and each hospital outpatient department have been calculated for 1987.

Empirical Foundations of Area Expenditure Targets

Project No.: 17-C-99473/3
Period: September 1989-September 1991
Funding: $ 381,860
Award: Cooperative Agreement
Awardee: The Urban Institute
Health Policy Center
2100 M Street, NW.
Washington, D.C. 20037
Project Officer: C. McKeen Cowles
Division of Reimbursement and Economic Studies

Description: This project will provide an empirical basis for considering whether volume performance standards should be uniform across the country or should vary by geographic area. It will also provide detailed descriptive analyses of variation in the volume and rates of growth in Medicare physician services and expenditures from 1985 through 1988 at State, metropolitan statistical area, and Medicare pricing locality levels. Data on rates of growth will be developed for physician specialty and by type of service. The basic objectives are to:

- Develop an appropriate data base.
- Describe extensive area variations in both the level and rate of growth in Medicare physician volume and expenditures.
- Examine the border crossing issue (i.e., the extent to which individuals living in one area use services in another area).

Status: A number of supporting tasks are in progress. These include developing a fixed-weight price index based on allowed charges and constructing analytically meaningful types-of-service (TOS) categories with clinical input from physician consultants. Categories include office visits, other visits, consultations, routine tests, specialized tests, diagnostic procedures, therapeutic procedures, minor surgeries and minor therapies, and major surgery. A draft TOS report is under review. The TOS system under review converts 9,567 Health Care Financing Administration Common Procedure Coding System (HCPCS) codes into one of the new TOS categories. Also, the project has generated tables showing, *inter alia*, changes in volume and expenditures for 1985 and 1988 by HCPCS code and the new TOS categories.

Billing Patterns for Critical-Care Physician Services

Project No.: 99-C-99168/3
Period: August 1989-January 1991
Funding: $ 99,559
Award: Cooperative Agreement
Awardee: Project HOPE Research Center
(See page 74)
Project Officer: William Buczko
Division of Reimbursement and Economic Studies

Description: The objective of this project is to evaluate the potential for bundling payments for critical-care physician services under Medicare into more inclusive payment packages. Critical-care physician services are provided in coronary care, intensive care, or other emergency care units of hospitals. An analysis of physician billing patterns for critical-care services and an examination of the extent of variation in utilization and costs will be performed. These analyses will be used to evaluate the potential for bundling payments for these services.

Status: Linked data bases have been developed and data analysis will begin shortly.

Physician Practice Patterns

Project No.: 99-C-98489/9
Period: August 1989-July 1991
Funding: $ 100,000
Award: Cooperative Agreement
Awardee: The RAND Policy Research Center
(See page 72)
Project Officer: Benson L. Dutton
Division of Reimbursement and Economic Studies

Description: The purpose of this study is to explore the utility of constructing a provider-level analysis file that combines information from the provider-level Part B Medicare Annual Data (BMAD) file with information about hospitalizations from the Medicare provider analysis and review (MEDPAR) file. To determine the utility of the resulting linked files, this project will include three areas of analysis in which individual physician practice patterns will be studied. The three areas relate to the role of physicians in creating costly cases, the effect of national global fee standards on the reimbursement of individual surgeons, and the practice of billing for assistants at surgery by primary providers.

Status: Analysis files for each task in this project are being created. The 100-percent MEDPAR file for calendar year 1986 is being linked to the BMAD file. The final report is expected in January 1991.

Policy Implications of Alternative Volume Performance Standards

Project No.: 99-C-98489/9
Period: August 1990-July 1991
Funding: $ 69,232
Award: Cooperative Agreement
Awardee: The RAND Policy Research Center
(See page 72)
Project Officer: C. McKeen Cowles
Division of Reimbursement and Economic Studies

Description: The primary goal of this study is to provide the Health Care Financing Administration with a more comprehensive analysis of the issues and implications of alternative performance standards than is required by the mandated studies. The specific objectives are to inventory alternative methods for establishing performance standards, including a review of the theoretical and empirical literature concerning the advantages and limitations of these alternatives, and to develop a framework for analyzing the policy implications of alternative performance standards.

Status: This project is in the early developmental stage.

Considerations of Inappropriate Utilization and Access Adjustments of Medicare Volume Performance Standards

Project No.: 99-C-99168/3
Period: September 1990-April 1991
Funding: $ 39,855
Award: Cooperative Agreement
Awardee: Project HOPE Research Center
(See page 74)
Project Officer: Michael Borowitz
Division of Reimbursement and Economic Studies

Description: Among the factors the Secretary of Health and Human Services is required to consider in the annual recommendation for the rate of increase in the Medicare Volume Performance Standards (MVPSs) for physician services are evidence of inappropriate utilization and lack of access to necessary physician services. This project will develop a conceptual framework to assess objective information on these two MVPS elements, how they might be measured, the availability of data bases to measure them, and how they might be incorporated into an MVPS recommendation. The focus of the project will be on year-to-year changes.

Status: The project is in the early developmental stage.

Growth in Physician Services and Utilization, Diffusion, and Substitution of High-Technology Procedures

Project No.: 500-89-0050
Period: September 1989-June 1991
Funding: $ 235,096
Award: Contract
Contractor: Health Economics Research, Inc. (HERI)
Hillsite Office Building
75 Second Avenue, Suite 100
Needham, Mass. 02194
Project Officer: Nancy T. McCall
Division of Reimbursement and Economic Studies

Description: The purpose of this contract is to document trends in utilization and substitution of six high-technology procedures using the 1985-88 Part B Medicare Annual Data files and to conduct an analysis of diffusion of these high-technology procedures using a multi-State 100-percent claims data base. The six technologies studied were coronary artery bypass grafts, percutaneous transluminal coronary angioplasty, computerized axial tomography scan, magnetic resonance imaging, surgical kidney stone removal, and extracorporeal shock wave lithotripsy.

Status: A draft final report is expected in October 1990. Health Economics Research has been awarded a supplemental contract to perform additional beneficiary-level analyses of technology diffusion. Completion of work is not expected before April 1991.

Beneficiary Use of Services Over Time

Project No.: 99-C-98526/1
Period: August 1990-July 1991
Funding: $ 99,160
Award: Cooperative Agreement
Awardee: Brandeis University Research Center
(See page 73)
Project Officer: Benson L. Dutton
Division of Reimbursement and Economic Studies

Description: This project will examine changes in the patterns of Part B spending over time at the individual beneficiary level, including not only users of physician services but nonusers as well. In particular, this project will decompose spending growth into its major components (i.e., user rates, services per user, and price per service) and will compare rates of changes in these components for beneficiaries of varying characteristics. This project will also examine changes in the composition of spending on physician services, such as the extent to which services are being provided in offices and hospital outpatient departments versus other settings.

Status: This project is in the early developmental stage.

Dialysis Codes and Billing Patterns

Project No.: 99-C-98489/9
Period: August 1990-July 1991
Funding: $ 98,696
Award: Cooperative Agreement
Awardee: The RAND Policy Research Center
(See page 72)
Project Officer: Joel W. Greer
Division of Beneficiary Studies

Description: This project will:

- Analyze the effects of the Health Care Financing Administration's implementation of the dialysis procedure codes.
- Analyze the patterns of physician billings for beneficiaries receiving dialysis services.
- Compare prevailing charges for the changed codes.
- Analyze the feasibility of bundling separately billed dialysis services into more comprehensive payment amounts.
- Assess the extent to which separate dialysis codes should continue to be recognized by Medicare for payment purposes.

The study will also attempt to detail the context of inpatient dialysis, noting in particular the reasons why patients need inpatient dialysis and what other kinds of physician services they receive in the hospital.

Status: This project is in the early implementation stage.

Physician Pricing Issues

1988 Survey of Physicians' Practice Costs and Incomes

Project No.: 500-88-0045
Period: June 1988-January 1991
Funding: $ 2.8 million
Award: Contract
Contractor: National Opinion Research Center (NORC)
1155 East 60th Street
Chicago, Ill. 60637
Project Officer: Harry L. Savitt
Division of Beneficiary Studies
Mandates: Social Security Amendments of 1972
(Public Law 92-603)
Omnibus Budget Reconciliation Act of 1987
(Public Law 100-203)

Description: The purpose of this contract is to interview 5,000 U.S. physicians on the cost of practice, productivity, malpractice insurance, volume intensity of certain procedures, and out-of-pocket costs to beneficiaries. The survey results for the 9 census divisions will focus on 16 medical specialties divided into 3 types of areas—large urban, small urban, and rural.

Status: The survey team entered the field on July 24, 1989, and completed the survey in late Summer 1990. Public use data tapes and documentation are expected to be available by Spring 1991.

Analysis of 1988 Physicians' Practice Costs Survey Equipment Supplement

Project No.: 99-C-98526/1
Period: September 1990-August 1991
Funding: $ 15,090
Award: Cooperative Agreement
Awardee: Brandeis University Research Center
(See page 73)
Project Officer: Nancy T. McCall
Division of Reimbursement and Economic Studies

Description: During Phase I, Brandeis will clean and evaluate the data in the 1988 Physicians' Practice Costs Survey Equipment Supplement. During Phase II, Brandeis will perform descriptive and multivariate analyses based on these data. The equipment and laboratory section of the public use data tape and codebook will be systematically reviewed for quality and completeness of data, most particularly for item nonresponse. Although descriptive statistics will be reported based on Phase I, multivariate analyses will be conducted only if the sample sizes and response rates will support reliable analyses.

Status: This project is in the early developmental stage.

Allocating Practice Costs: Conceptual Issues

Project No.: 99-C-99169/5
Period: August 1990-July 1991
Funding: $ 49,112
Award: Cooperative Agreement
Awardee: University of Minnesota Research Center
(See page 75)
Project Officer: Jesse M. Levy
Division of Reimbursement and Economic Studies
Mandate: Omnibus Budget Reconciliation Act of 1989
(Public Law 101-239)

Description: The purpose of this task is to explore alternative methods for allocating practice costs across procedures. It will examine the accounting method currently being developed by the Physician Payment Review Commission and will compare this with other methods suggested in the accounting and economics literature. As might be expected, the choice of method will depend in part on the objectives posited for the fee schedule. The two primary candidates to be considered are incentive neutrality (to providers) and equity (across providers). However, other objectives—such as cost containment, encouragement of certain types of procedures and discouragement of others, and long-run allocation of physician manpower across specialties—will also be considered.

Status: This project is in the early developmental stage.

Analysis of Medicare Customary Charge Distributions

Project No.: 17-C-99229/3
Period: June 1988-March 1991
Funding: $ 782,180
Award: Cooperative Agreement
Awardee: HK Research Corporation
21 Governor's Court
Baltimore, Md. 21207
Project Officer: Benson L. Dutton
Division of Reimbursement and Economic Studies

Description: The goals of this project are to:

- Develop a data base on customary charge distributions in four States for multiple years.
- Analyze the distribution of customary charges relative to the prevailing charges within the Medicare pricing locality over time.
- Simulate the redistributive effects of potential changes in physician payment parameters.

A data base will be developed by which volume-adjusted customary charge distributions and variations will be examined. Simulations of the impact of alternative payment proposals will also be conducted.

Status: This project is an extension of earlier work involving comparative analyses of prevailing charges and customary charge data over time (1987-89) from four moderately sized Medicare Part B carriers (i.e., those servicing the States of Alabama, Arizona, Oklahoma, and Oregon). This supplemental award will allow project staff to investigate the feasibility of collecting customary and prevailing charge data from several large Medicare Part B carriers (e.g., those servicing Indiana, Maryland, Massachusetts, Pennsylvania, and the District of Columbia). Data from this project are expected to contribute to the development of physician payment reform policies and should be available in Spring 1991.

A National Study of Resource-Based Relative Value Scales for Physician Services

Project No.: 17-C-98795/1
Period: September 1985-December 1991
Funding: $ 4,723,403
Award: Cooperative Agreement
Awardee: President and Fellows of Harvard College
Harvard School of Public Health
1350 Massachusetts Avenue
Holyoke Center, 4th Floor
Cambridge, Mass. 02138
Project Officer: Jesse M. Levy
Division of Reimbursement and Economic Studies

Mandates: Consolidated Omnibus Budget Reconciliation Act of 1985 (Public Law 99-272)
Omnibus Budget Reconciliation Act of 1986 (Public Law 99-509)
Omnibus Budget Reconciliation Act of 1987 (Public Law 100-203)

Description: The Phase I study of this cooperative agreement developed a national resource-based relative value scale and presented results for physician services in 18 specialties. Resource-based relative values are hypothesized to be a function of physician work before, during, and after the service; of specialty-specific relative practice costs; and of specialty-specific relative opportunity costs. Physicians were surveyed to determine the amount of work expended during the performance of 409 services and procedures. Weighted least squares was employed to make work across specialties comparable. Extrapolation techniques were used to generate relative values for additional nonsurveyed services in the studied specialties. The Phase I study showed a large variation in resource requirements both within and among specialties. The methodology and results were subjected to review by experts in various fields. Phase II of the cooperative agreement extends the study to 15 additional specialties and subspecialties and refines and revises the study methodology. Phase III will further refine the study.

Status: The Phase I study of the cooperative agreement has been completed. The final report is available in several volumes plus data tapes from the National Technical Information Service:

- Volume I. Executive summary, accession number PB89-101828.
- Volume II. Data description and analysis, accession number PB89-101836.
- Volume III. Results and conclusions for surveyed procedures, accession number PB89-101844.
- Volume IV. Copies of surveys and other information, accession number PB89-101851.
- Volume IVA. Visit and consult methodology and results, accession number PB89-164412.
- Volume V. Documentation for the data tape, accession number PB89-101869.
- Volume VI. Final values and components, accession number PB89-164420.
- Survey data tape (including Volume IV and Volume V documentation), accession number PB89-101810.
- Phase I final values data tape, accession number PB89-164404.

Phase II has expanded the scope of the study to include cardiology, emergency medicine, gastroenterology, hematology and oncology, infectious disease, nephrology, neurology, neurosurgery, nuclear medicine, osteopathic medicine, physical and rehabilitative medicine, plastic surgery, pulmonary medicine, and therapeutic medicine. This phase will be completed in November 1990.

Analysis of Group-Based Methods for Medicare Fee Schedule Refinement

Project No.: 99-C-98489/9
Period: August 1990-July 1991
Funding: $ 97,263
Award: Cooperative Agreement
Awardee: The RAND Policy Research Center
(See page 72)
Project Officer: Jesse M. Levy
Division of Reimbursement and Economic Studies
Mandate: Omnibus Budget Reconciliation Act of 1989
(Public Law 101-239)

Description: The objective of this study is to evaluate alternative group-based methods of policy decisionmaking to ascertain the costs and benefits of each as a tool for determining new or revised Medicare fees based on a resource-based relative value scale. The group-based methods will be evaluated and compared in terms of:

- Ease and cost of implementation.
- Applicability to different medical procedures and specialties.
- Extent to which different interested parties influence the decision.
- Likely winners and losers among the stakeholders.

Status: This project is in the early developmental stage.

Geographic and Temporal Variations in Medicare Physician Expenditures

Project No.: 17-C-98999/1
Period: June 1987-December 1991
Funding: $ 1,972,198
Award: Cooperative Agreement
Awardee: Center for Health Economics Research
Hillsite Office Building
75 Second Avenue, Suite 100
Needham, Mass. 02194
Project Officer: Nancy T. McCall
Division of Reimbursement and Economic Studies

Description: This project will address a broad range of physician payment issues. Initially, researchers will focus on constructing a data file using 1985-88 merged Part A and Part B claims from 10 carriers that represent all 9 census regions and 18 percent of all Medicare beneficiaries. Examples of issues to be analyzed using these files include overpriced surgical and anesthesia fees, decomposition of Part B expenditures into price and quantity components, effect of competition on price and quantity variation, variation in assignment rates and participation, inpatient and outpatient practice patterns and substitutions over time, and incentives provided by Medicare's at-risk payment rates. Simulations of selected physician payment changes will also be performed.

Status: Carrier claims data for 1985-88 have been received for all States. The following reports are available from the National Technical Information Service:

- "Geographic Variation in Surgical Fees" (a summary of findings for 6 surgical fees for 1986), accession number PB90-122466.
- "Impact of Alternative Medicare Fee Schedule on Physicians" (a special report based on an analysis of a sample of 1986 national Part B data), accession number PB90-225855.
- "Geographic Variation in Anesthesiologists' Fees" (data based on 1986 Medicare Part B claims prior to implementation of a uniform relative value guide and elimination of modifiers), accession number PB90-222191.
- "Trends in Inpatient Use by the Elderly and Other Adults for Selected Procedures: 1982-1987" (National Hospital Discharge Survey data are used to determine the extent to which increases in the volume of physician services provided are a phenomenon of non-Medicare patients), accession number PB90-225848.

Survey of State Regulation of Physician Office Medical Equipment

Project No.: 99-C-99168/3
Period: August 1990-July 1991
Funding: $ 66,468
Award: Cooperative Agreement
Awardee: Project HOPE Research Center
(See page 74)
Project Officer: Alvin L. Freedman
Division of Reimbursement and Economic Studies

Description: This project will determine the nature and scope of State regulation of physician office medical equipment other than laboratory equipment. The analysis will cover selected States, some that regulate various types of physician office equipment, others that do not regulate them. The analysis will also examine the extensiveness of such regulation, whether equipment is inspected for general health and safety reasons, and whether the equipment is tested for accuracy (and the frequency with which accuracy checks are conducted). The analysis will focus on the types of physician office medical equipment that produce high-volume Medicare tests, including radiology equipment and physiological testing equipment.

Status: This project is in the developmental stage. Researchers have begun examining the relevant statutes and regulations in selected States and will complete this examination before starting a survey of all the States.

Refining the Geographic Practice Cost Index: Implications for Urban and Rural Areas

Project No.: 17-C-99222/3
Period: June 1988-June 1991

Funding: $ 338,831
Award: Cooperative Agreement
Awardee: The Urban Institute
Health Policy Center
2100 M Street, NW.
Washington, D.C. 20037
Project Officer: Sherry A. Terrell
Division of Reimbursement and Economic Studies
Mandates: Omnibus Budget Reconciliation Act of 1986
(Public Law 99-509)
Omnibus Budget Reconciliation Act of 1987
(Public Law 100-203)

Description: This study extends the analyses of the interim Geographic Practice Cost Indexes previously developed under Cooperative Agreement 99-C-98526/1. The analyses will include refining and updating the indexes, evaluating the relationship among the various index alternatives, measuring how the refined and updated numbers differ from the interim set, and revising some earlier comparisons between prevailing charges and practice costs.

Status: More refined indexes have been developed, resulting in fewer methodological compromises. The basic structure of the indexes, a Laspeyres input price index, was retained. Sampling error was substantially reduced by using earnings data from the 20-percent sample of the 1980 Census instead of the 1-percent public use file. A second set of refinements included the use of more current data to update cost weights. The indexes were then calculated for metropolitan statistical areas and rural areas of States, as well as by States and the Medicare pricing localities. Special attention was given to rural areas. Work in calculating an index for Puerto Rico has been completed. A related article, "Cost of Practice and Geographic Variation in Medicare Fees," was published in *Health Affairs*, Vol. 8, No. 3, Fall 1989. A report entitled "The Geographic Medicare Index: Alternative Approaches" has been completed and is available from the National Technical Information Service, accession number PB89-216592. Two publications entitled "Does Cost of Practice Explain Geographic Differences in Medicare Fees?" and "Growth in Medicare Expenditures, 1983-1985: Was PPS a Factor?" are available from the Urban Institute Publications Office, Washington, D.C. Other tasks to be conducted over the next year include specialty-specific analyses of malpractice premiums and an analysis of assignment rates. Final reports are expected by mid-1991.

Statistical Properties of Physician Practice Cost Surveys

Project No.: 99-C-99168/3
Period: September 1990-May 1991
Funding: $ 67,718
Award: Cooperative Agreement
Awardee: Project HOPE Research Center
(See page 74)
Project Officer: Nancy T. McCall
Division of Reimbursement and Economic Studies

Description: The project will analyze the statistical properties of selected national physician surveys for the precision of overall estimates and for each major physician specialty identified in published results. The analysis will:

- Assess the feasibility of and methods for combining the results of these surveys.
- Estimate standard errors and confidence intervals for the results of the major physician surveys.
- Assess the feasibility of combining sequential years of the same survey.
- Review systematically the 1988 Physicians' Practice Cost Survey, excluding the equipment and laboratory section; Public Use Data Tape; and the associated codebook.
- Consider the optimal design for future physician surveys and the feasibility of collaborative survey efforts.

Status: This project is in the early developmental stage.

Medicare Physician Experience Differentials

Project No.: 99-C-98489/9
Period: July 1988-July 1990
Funding: $ 30,401
Award: Cooperative Agreement
Awardee: The RAND Policy Research Center
(See page 72)
Project Officer: Benson L. Dutton
Division of Reimbursement and Economic Studies

Description: Under current policies as defined by Medicare, new physicians are reimbursed at 80 percent of the prevailing rate for experienced physicians. This study is an attempt to analyze whether the size of the payment differential is appropriate and whether the current policies provide comparable incentives to encourage new and experienced physicians to treat Medicare patients.

Status: RAND has completed all analyses. A draft report was submitted to the Office of Research and Demonstrations in August 1990.

Physician Volume Responses to Medicare Fee Reduction for Twelve Overpriced Procedures

Funding: Intramural
Project Director: Nancy T. McCall
Division of Reimbursement and Economic Studies

Description: On April 1, 1988, Congress reduced the Medicare prevailing charge for 12 procedures which it perceived to be overpriced. Prevailing charges were reduced by 2 percent and were further reduced by 0.23

of a percentage point for each percent that the 1987 prevailing charge exceeds 85 percent of the weighted national average of all prevailing charges for the respective procedure. The reductions varied across physicians and Medicare pricing localities, yielding nominal changes ranging from 0 to 17.5 percent. The variable reduction in Medicare prevailing charges provides a natural experiment in which to study physician volume responses to price reductions. The purpose of this intramural study is to provide policymakers with empirical evidence on the response of physicians in 1988 to the reduction in Medicare prices. This study will address 5 questions—4 descriptive questions and 1 behavioral question. The first 3 questions provide descriptive information on the use of and payment for the 12 overpriced procedures. The fourth question focuses on the issue of substitution, either coding or performance of similar procedures. The behavioral question addresses the issue of how the volume of services provided by a physician responds to the reduction in the prevailing charges. To obtain estimates of the volume response, multivariate regression analyses will be performed. The analyses will be conducted using a 4-State data base containing 100-percent Medicare Part B claims aggregated to the physician level.

Status: The project is in the early developmental stage.

Global Fees

Project No.: 99-C-98489/9
Period: May 1988-December 1989
Funding: $ 90,886
Award: Cooperative Agreement
Awardee: The RAND Policy Research Center
(See page 72)
Project Officer: Benson L. Dutton
Division of Reimbursement and Economic Studies

Description: The purpose of this project was to examine issues related to global fee billings and reimbursement patterns. The Medicare fee for a surgical procedure that currently includes all normal and uncomplicated followup care is called a global fee. This fee includes the attending surgeon's visits to the patient while in the hospital and may include followup visits after the patient is discharged. Because the prospective payment system has resulted in large decreases in the length of hospital stays, further research was needed into global fee billings. This research enhanced understanding of the changes taking place in the number of services and visits provided under a global fee as well as overall reimbursement and billing patterns.

Status: This project has been completed. The final report entitled "Recent Trends in Length of Stay for Medicare Surgical Patients" was submitted to the Health Care Financing Administration. This report has also been submitted to the RAND Publication Department and will be published as RAND Report R-3940-HCFA.

Global Fees for Surgery

Project No.: 99-C-98526/1
Period: August 1989-July 1990
Funding: $ 73,899
Award: Cooperative Agreement
Awardee: Brandeis University Research Center
(See page 73)
Project Officer: Sherry A. Terrell
Division of Reimbursement and Economic Studies

Description: Most surgeons and carriers in a given area share a common definition of the global fee. However, wide variations between areas and in physician billings have been observed for related diagnostic and surgical services. Concern exists that some surgeons may bill extra for related services to offset any perceived revenue losses caused by a Medicare fee schedule based on the resource-based relative value scale. This study documents current billing patterns by surgeons in calendar year 1987 for extra services and identifies potential unbundling that might occur if a uniform national global fee definition replaces current billing practices.

Status: This study has been completed. Using the 1987 Linked Part A and Part B Medicare Annual Data for 5 percent of all beneficiaries, pre- and postoperative services were studied for time periods of 7 days prior to surgery, the day of surgery, and 90 days after surgery. Pre- and postoperative care was defined to include visits, consultations, diagnostic tests, and incidental surgeries. The 10 procedures studied were cholecystectomy, partial colectomy, carotid thromboendarterectomy, total hip replacement, total knee replacement, lens (cataract) procedures, laser eye procedures, coronary artery bypass graft surgery, permanent pacemakers, and transurethral resection of the prostate (TURP). Readmissions were examined separately. Detailed tables were presented for the average number of services within the study time periods. Selected carrier global fee policies were compared to the actual billing activity in those carriers. Few preoperative consultation bills were submitted for orthopedic and ophthalmologic procedures studied by the primary surgeon. Billings for preoperative outpatient visits were not common, whereas preoperative hospital visits were billed relatively frequently for general surgical procedures and TURPs. For every 10 patients more than 2 postoperative hospital visits were billed in excess of the global fee. Researchers confirmed substantial carrier variation in mean services billed and global fee policy. They noted that most preoperative diagnostic tests were performed by physicians other than the primary surgeon and found extensive billings by other physicians for all 3 time periods. The final report entitled "Global Fees for Surgery" will soon be available from the National Technical Information Service. More research on the role(s) of physicians other than the primary surgeon is recommended.

Surgical Global Fee Packages

Project No.: 99-C-98526/1
Period: August 1990-July 1991
Funding: $ 49,811
Award: Cooperative Agreement
Awardee: Brandeis University Research Center
(See page 73)
Project Officer: Sherry A. Terrell
Division of Reimbursement and Economic Studies
Mandate: Omnibus Budget Reconciliation Act of 1989
(Public Law 101-239)

Description: This project extends the Center for Health Economic Research August 1989-July 1990 work on global fees for surgery. A key element in the construction of the new Medicare physician fee schedule is the work value that is attached to each service and procedure. The purpose of this project is to determine the total work values for the top 100 surgical procedures and to test the sensitivity of total work values to alternative definitions of the global period, especially for the preoperative time period. Because Medicare carriers historically have used different definitions of the global fee, the implementation of a single consistent definition of total work may have differential effects around the country. This project will examine those differential effects as well as the resulting changes by carrier.

Status: This project is in the early developmental stage.

Assistants at Surgery: Geographic Variation

Project No.: 99-C-98489/9
Period: August 1990-July 1991
Funding: $ 106,594
Award: Cooperative Agreement
Awardee: The RAND Policy Research Center
(See page 72)
Project Officer: Benson L. Dutton
Division of Reimbursement and Economic Studies

Description: This study seeks to explain the large geographical variation in the use of physicians as assistants at surgery and to describe patterns of use of assistants in terms of the primary surgeon's specialty, hospital characteristics, and characteristics of the physicians serving as assistants at surgery. This study will also develop a plan for assessing the feasibility of bundling payments for assistants at surgery into the hospital diagnosis-related group payment.

Status: This project is in the early developmental stage.

Multiple Physicians Furnishing Surgery

Project No.: 99-C-98526/1
Period: August 1990-July 1991
Funding: $ 149,374
Award: Cooperative Agreement
Awardee: Brandeis University Research Center
(See page 73)
Project Officer: Benson L. Dutton
Division of Reimbursement and Economic Studies
Mandate: Omnibus Budget Reconciliation Act of 1989
(Public Law 101-239)

Description: This project will:

- Provide a detailed descriptive analysis of the extent to which physicians, other than the primary surgeon, provide separately billable services during a surgery. The top 100 most frequently used Medicare surgical procedures based on expenditures will be examined.
- Assess the extent to which additional physicians would enhance the productivity of the primary surgeon or would be substituted to perform the work that would otherwise be provided by the primary surgeon.
- Provide a descriptive analysis of the frequency with which cataract surgery is performed on Medicare beneficiaries on a sequential basis by the same physician.
- Assess the amount of Medicare payment reduction that could be made under a resource-based fee schedule.

Status: This project is in the early developmental stage.

Place of Service Payment Differentials

Project No.: 99-C-98526/1
Period: September 1990-July 1991
Funding: $ 50,123
Award: Cooperative Agreement
Awardee: Brandeis University Research Center
(See page 73)
Project Officer: Nancy T. McCall
Division of Reimbursement and Economic Studies
Mandate: Omnibus Budget Reconciliation Act of 1989
(Public Law 101-239)

Description: This project will be used to analyze patterns of ambulatory surgery and the payment rate differentials between physicians and facilities across three ambulatory settings—the physician's office, the hospital outpatient department, and freestanding ambulatory surgery centers. The study will describe high-volume ambulatory surgery procedures, calculate percentage distributions of high-volume surgical procedures, develop alternative payment approaches for ambulatory surgical procedures, and estimate the effect of these alternatives on Medicare payments.

Status: This project is in the early developmental stage.

Geographic Variation in Inpatient Physician Consultation Rates

Project No.: 99-C-98526/1

Period: May 1988-July 1989
Funding: $ 51,829
Award: Cooperative Agreement
Awardee: Brandeis University Research Center
(See page 73)
Project Officer: Sherry A. Terrell
Division of Reimbursement and Economic Studies

Description: This study examines the distribution of Medicare Part B consultation dollars for calendar year 1986 by physician specialty, beneficiary characteristics, geographic area, and type of admission. Analyses were performed on the variation in consultation rates across the country, as well as on the variation in procedure code distribution and in mean allowed charges per consultation. These analyses included a comparison of hospital visits and consultations to determine whether these 2 services are being used interchangeably for billing purposes.

Status: This study is completed. Three-fourths of all Medicare consultations are performed as inpatient services, the remainder are performed in physicians' offices. The distribution of location varies widely by carrier. Although Medicare recognizes almost 40 physician specialties, nearly one-half of all consultations are performed by physicians in only 3 specialties—internal medicine, cardiology, and neurology. Over 40 percent of all consultations, regardless of location, are billed at the initial comprehensive level. In an analysis of inpatient consultations within several diagnosis-related groups (DRGs), the following patient and DRG-specific factors appeared to be related to an increased rate of consultations per discharge—the presence of chronic renal failure; being placed in a DRG distinguished by greater age; or the presence of complications. Hospital characteristics related to increased consultation rates were designation as a teaching hospital, location in an urban area, and increasing metropolitan statistical area size. These data do not show any clear evidence of substitution of physician consultations for visits. The final report entitled "Physician Consultative Service Under Medicare" is available from the National Technical Information Service, accession number PB90-135708.

Urban and Rural Differences in Physician Practices

Project No.: 99-C-98526/1
Period: August 1988-July 1990
Funding: $ 54,270
Award: Cooperative Agreement
Awardee: Brandeis University Research Center
(See page 73)
Project Officer: Sherry A. Terrell
Division of Reimbursement and Economic Studies
Mandate: Omnibus Budget Reconciliation Act of 1987
(Public Law 100-203)

Description: This study, conducted in two phases, provides a comprehensive comparison of urban and rural physician practices. Its objective is to create a general set of baseline data on physicians' practices in different types of communities.

Status: Brandeis received a special purpose public-use file for the 1986 Socioeconomic Monitoring System Core Survey of the American Medical Association and subsequently completed a number of descriptive analyses. Phase I of this project is completed. A draft final report has been received and is being reviewed by the project officer. Preliminary findings are that:

- Urban physicians are more specialized than are rural physicians, especially in surgical specialties (ophthalmology and orthopedics) used frequently by Medicare beneficiaries.
- Rural physicians are more likely to practice alone, to be self-employed, and to be organized as sole proprietors than are urban physicians.
- Rural physicians are less likely to participate in Medicare, and nonparticipating rural physicians have lower assignment rates than urban practitioners.
- Rural physicians are more dependent on public sources of revenue, such as Medicare and Medicaid, than are their urban counterparts.

Over the next year, in Phase II, these descriptive analyses will be extended to examine differences in cost of practice, fees, productivity, type and mix of services and procedures provided, and the volume of services provided.

Analysis of Malpractice Premium Data

Project No.: 99-C-98526/1
Period: August 1990-July 1991
Funding: $ 99,901
Award: Cooperative Agreement
Awardee: Brandeis University Research Center
(See page 73)
Project Officer: Benson L. Dutton
Division of Reimbursement and Economic Studies

Description: This project will consist of four tasks. In the first task, project staff will explain why estimates of the rate of increase in premiums computed from Health Care Financing Administration (HCFA) survey data differ from the expense growth rate documented by the American Medical Association and in *Medical Economics* surveys. In the second task, they will collect additional premium data from a broader range of companies than those included in HCFA's current survey. In the third task, project staff will examine the rate of change in premiums, using data from mutual funds and physician reciprocal companies, rather than from stock companies. In the fourth task, they will use these data to develop new Malpractice Geographic Practice Cost Indexes based on averages of premiums within each State.

Status: This project is in the early developmental stage.

Malpractice Component of the Medicare Economic Index

Funding: Intramural
Project Director: Benson L. Dutton
Division of Reimbursement and Economic Studies
Mandate: Social Security Amendments of 1972 (Public Law 92-603)

Description: Each year, the Health Care Financing Administration (HCFA) publishes the Medicare Economic Index (MEI), which is congressionally mandated by Public Law 92-603, for use in establishing the reasonable charges for physician services. The MEI is developed by HCFA's Office of the Actuary in accordance with the basic methodology set forth in 42 *Code of Federal Regulations* 405.504(a)(3)(i) from selected components of the Consumer Price Index or the Producer Price Index. Since January 1, 1987, the MEI increase factors have been established by Congress through Section 9331(c)(i) of Public Law 99-509 for fee-screen year (FSY) 1987, Section 4041(a) of Public Law 100-203 for the first 3 months of FSY 1988, Section 4042(b)(4)(F)(ii) for the remainder of FSY 1988, and Section 4042(b)(4)(F)(iii) for FSY 1989. At this time, no provisions for establishing MEI increase factors for FSY 1990 have been set. HCFA's Office of Research and Demonstrations develops data for calculating the malpractice component of the MEI. These data are obtained annually from major medical malpractice insurers. The medical malpractice component estimates the annual changes in medical malpractice insurance premiums for specific levels of coverage.

Status: The requisite data have been obtained so that results could be provided to HCFA's Office of the Actuary. Announcement of the MEI will be made in the *Federal Register*, for FSY 1991 (January 1, 1991 to December 31, 1991).

Analysis of Technological Changes in Physician Services

Project No.: 99-C-99168/3
Period: August 1990-July 1991
Funding: $ 74,582
Award: Cooperative Agreement
Awardee: Project HOPE Research Center
(See page 74)
Project Officer: Michael Borowitz
Division of Reimbursement and Economic Studies
Mandate: Omnibus Budget Reconciliation Act of 1989
(Public Law 101-239)

Description: This project has three objectives. The first is to examine alternative approaches for measuring the impact of technological change on Medicare physician service volume and total expenditures. In addition to developing a conceptual framework, this examination includes an assessment of the feasibility of each approach. The second is to identify technological advances that have significantly increased Medicare physician expenditures in the recent past or that could lead to such increases in the future. The third is to apply the proposed method or alternative methods to estimate the impact of several of the identified technologies on Medicare physician services volume and overall expenditures.

Status: This project is in the early developmental stage.

Diagnostic Tests—The Technical Component: Provider Volume and Ownership Patterns

Project No.: 99-C-99169/5
Period: August 1989-July 1990
Funding: $ 99,960
Award: Cooperative Agreement
Awardee: University of Minnesota Research Center
(See page 75)
Project Officer: Michael Borowitz
Division of Reimbursement and Economic Studies

Description: The purpose of this project is to investigate the appropriateness of payment levels for the technical component of diagnostic tests, using the Part B Medicare Annual Data provider file and other data sets. The technical-fee component of diagnostic tests is intended to compensate physicians for the capital costs of diagnostic equipment as well as the costs of operating the equipment. Researchers believe that the payment level for the technical component of diagnostic tests should be set just high enough to ensure both access and quality for Medicare beneficiaries. A previous study suggested that Medicare's payment for the technical component of several diagnostic tests was overpriced. This study will refine the estimates of the components that make up the cost of the technical component of diagnostic tests, such as the cost of equipment, the cost of technicians, and the volume of services.

Status: This project is near completion.

Diagnostic Testing: Policy Analysis of Pricing Options

Project No.: 99-C-99169/5
Period: August 1990-July 1991
Funding: $ 99,979
Award: Cooperative Agreement
Awardee: University of Minnesota Research Center
(See page 75)
Project Officer: Michael Borowitz
Division of Reimbursement and Economic Studies

Description: Previous work at the University of Pennsylvania had indicated that payment for the technical component of some diagnostic tests appears, under some reasonable assumptions, higher than needed to pay a market rate of return on investment. Still needed is a policy analysis of pricing options, one that

examines alternative ways of dealing with volume and explores their distributional implications. The objective is to choose a pricing policy that comes as close as possible to incentive neutrality and payment of fair prices. To complete analysis of pricing options for diagnostic testing, this project will undertake tasks intended, in part, to refine the data used in earlier estimates and, in part, to explore alternative payment schemes when cost is volume-dependent.

Status: This project is in the early developmental stage.

Bundling Test Interpretation Fees into Medical Visit Fees

Project No.: 99-C-99168/3
Period: August 1990-April 1991
Funding: $ 125,447
Award: Cooperative Agreement
Awardee: Project HOPE Research Center
(See page 74)
Project Officer: Nancy T. McCall
Division of Reimbursement and Economic Studies

Description: This project will analyze the extent to which physician test interpretation fees and other professional services could be bundled into office visit fees. The use of separate fees for interpretation of diagnostic tests will be examined for all diagnostic tests in general, and for electrocardiography and chest X-rays in particular. Other professional services billed separately from the visit fee will be examined for all office visits. Strategies for bundling test interpretation fees and other professional service fees into office visit fees will be proposed and evaluated.

Status: This project is in the early developmental stage.

Anesthesia Payments

Project No.: 99-C-98526/1
Period: August 1989-July 1991
Funding: $ 46,000
Award: Cooperative Agreement
Awardee: Brandeis University Research Center
(See page 73)
Project Officer: Michael Borowitz
Division of Reimbursement and Economic Studies

Description: For nearly 20 years, anesthesia services have been billed and often paid on the basis of the sum of base value units (reflecting the complexity of a procedure), time units (measuring anesthesia time), and modifier units (special circumstances), multiplied by a dollar conversion factor. This study is designed to aid the Health Care Financing Administration in creating a uniform relative value scale for anesthesia services that would eliminate geographic variation stemming from different base units. It will focus on determining the extent of variation in time units under both anesthesia and surgical coding systems and the comparative ability of these two sets of codes to predict time units. Finally, the study will simulate the impact of folding average time units into the base unit value on payments for specific procedures and total Medicare expenditures.

Status: The project is still in the developmental stage.

Economies in Furnishing Physician Services

Project No.: 99-C-99169/5
Period: August 1989-October 1990
Funding: $ 50,814
Award: Cooperative Agreement
Awardee: University of Minnesota Research Center
(See page 75)
Project Officer: Jesse M. Levy
Division of Reimbursement and Economic Studies

Description: This project will provide a conceptual, theoretical, and practical review of the economies needed in producing physician services. The objectives will be to design practical ways for the Medicare program to measure economies in furnishing physician services and to provide information that can be used to help determine appropriate fee schedule amounts for physician services under Medicare when economies are present. Specific project tasks include developing a classification system for analyzing various types of economies in production, analyzing recent payment reform proposals in the context of the taxonomy, and assessing potential data bases that could be used to measure economies for producing physician services.

Status: A draft of the final report was received and is being reviewed.

Economies in Physician Practice

Project No.: 99-C-98526/1
Period: August 1990-July 1991
Funding: $ 125,055
Award: Cooperative Agreement
Awardee: Brandeis University Research Center
(See page 73)
Project Officer: Jesse M. Levy
Division of Reimbursement and Economic Studies
Mandate: Omnibus Budget Reconciliation Act of 1989
(Public Law 101-239)

Description: This project will include several tasks. Project staff will:

- Review the literature on economies of scale in physician practice.
- Determine the optimal practice scale for various practice sites, geographic locations, and configurations.
- Use existing data sources to estimate the optimal scale.
- Estimate the extent of inefficiencies that would be built into the relative values by basing the practice

expense and malpractice shares on data obtained from existing surveys of physicians.
- Analyze the extent of the inefficiencies.
- Analyze various options to eliminate the inefficiencies in the relative values.
- Analyze the issues involved with a proposal for a payment differential for physicians not practicing at the optimal scale.

Status: This project is in the early developmental stage.

Comparison of Medicare Fees to Private Payers

Project No.: 99-C-98526/1
Period: August 1989-July 1990
Funding: $ 79,771
Award: Cooperative Agreement
Awardee: Brandeis University Research Center
(See page 73)
Project Officer: William J. Sobaski
Division of Reimbursement and Economic Studies

Description: The comparison between Medicare payments to physicians versus those of private third-party payers is likely to affect beneficiaries' access to health care and the direct cost of those services incurred by beneficiaries. This study will be used to compare the extent to which Medicare and private-payer fees differ for the same services and the extent to which changes in Medicare fees caused by a resource-based relative value scale and/or a geographic practice cost index would affect these differences. Researchers will study the implications of these changes on access to different types of services.

Status: This study is near completion. A draft final report was received and is being reviewed.

Physician Preferred Provider Organization Demonstration

Project No.: 99-C-99169/5
Period: May 1988-July 1990
Funding: $ 213,991
Award: Cooperative Agreement
Awardee: University of Minnesota Research Center
(See page 75)
Project Officer: Victor G. McVicker
Division of Hospital Experimentation

Description: This project involved the planning and implementation of a preferred provider organization (PPO) demonstration for physician services offered to Medicare beneficiaries as a program option. The project subtasks included:

- Analyzing and identifying site selection criteria, provider and beneficiary participation incentives, administrative procedures, and the potential savings to the Health Care Financing Administration (HCFA).
- Identifying potential sites and soliciting letters of interest.
- Requesting applications.
- Preparing waiver cost estimates.
- Reviewing implementation plans of selected sites and monitoring progress.

Status: The University of Minnesota, through its subcontractor, Mathematica Policy Research, Inc., was successful in performing the preliminary activities necessary for implementing the demonstration. Five PPOs were selected to participate (Family Health Plan, Minnesota; CAPP CARE, Inc., California; Health Link, Inc., Missouri; CareMark, Inc., Oregon; and Blue Cross and Blue Shield of Arizona). The final report on the implementation of the demonstration was received in HCFA's Office of Research and Demonstrations and is being reviewed.

Physician Preferred Provider Organization Demonstration Sites

Project No.: 95-C-99346/5
Period: January 1989-September 1991
Funding: $ 238,038
Award: Cooperative Agreement
Awardee: Family Health Plan
3800 West 80th Street, Suite 1450
Bloomington, Minn. 55431
Project Officer: Victor G. McVicker
Division of Hospital Experimentation

Description: Family Health Plan is one of five preferred provider organization (PPO) demonstration sites participating in the Medicare physician PPO pilot demonstration. Family Health Plan is a privately owned, for-profit subsidiary of Metrocare National, Inc. Family Health Plan supplies a PPO network, medical service review, and related benefit management services. The Medicare PPO demonstration will be conducted in the Minneapolis/St. Paul area and in six adjacent counties. Family Health Plan will market services primarily to employer retiree groups although individual beneficiaries may be contacted.

Status: The demonstration project is divided into two distinct periods, a developmental phase and an operational phase. Family Health Plan is still in the developmental phase, and no startup date is set for the operational phase.

Project No.: 95-C-99340/9
Period: January 1989-September 1992
Funding: $ 1,785,000
Award: Cooperative Agreement
Awardee: CAPP CARE, Inc.
17390 Brookhurst Street
Fountain Valley, Calif. 92708
Project Officer: Michael Henesch
Division of Hospital Experimentation

Description: CAPP CARE is a for-profit preferred provider organization (PPO) physician network operating in 20 States. It is 1 of 5 PPO demonstration sites selected for the Medicare physician PPO pilot demonstration. This demonstration is conducted in Orange County, California, as a nonenrollment model

that allows any beneficiary in the service area to use CAPP CARE physicians at any time. Beneficiaries who receive services from CAPP CARE physicians participating in the demonstration are assured that those physicians will accept Medicare payments as payment in full. The purpose of this project is to evaluate the performance of physicians via utilization review, medical review, and quality assurance protocols, and to assess the impact on the Medicare program. The analysis will include prior authorization of all elective admissions and procedures—both inpatient and outpatient—and retrospective review based on paid claims data run against an automated ambulatory care review system.

Status: The developmental phase of the project has been completed, and implementation began on March 1, 1990.

Project No.: 95-C-99342/7
Period: January 1989-December 1991
Funding: $ 105,062
Award: Cooperative Agreement
Awardee: HealthLink, Inc.
9666 Olive Street Road, Suite 500
St. Louis, Mo. 63132
Project Officer: Michael Henesch
Division of Hospital Experimentation

Description: HealthLink was to be one of 5 preferred provider organization (PPO) demonstration sites participating in the Medicare physician PPO pilot demonstration. HealthLink is a hospital-sponsored, for-profit managed-care company that supplies a PPO network, medical service review, and related benefit management services. The Medicare PPO demonstration was to be conducted in the St. Louis metropolitan area, southern Illinois, and mid-Missouri. HealthLink was planning to market services to individual beneficiaries by offering a reduction in the Medicare coinsurance, as well as marketing services to employer retiree groups. The demonstration project was divided into 2 distinct periods, a developmental phase and an operational phase.

Status: HealthLink withdrew from the Medicare PPO pilot demonstration and submitted a final report dated June 1, 1990, to the Health Care Financing Administration. HealthLink cited difficulties in enrolling employer groups during the developmental phase as the reason for its withdrawal.

Project No.: 95-C-99349/0
Period: January 1989-June 1991
Funding: $ 105,000
Award: Cooperative Agreement
Awardee: CareMark, Inc.
2701 NW. Vaughn, Suite 710
Portland, Ore. 97210
Project Officer: Victor G. McVicker
Division of Hospital Experimentation

Description: CareMark was to be one of the five preferred provider organization (PPO) demonstration sites participating in the Medicare physician PPO pilot demonstration. CareMark is a managed-care company that supplies a PPO network, medical service review, and related benefit management services. The Medicare PPO demonstration was to be conducted in the Oregon counties of Multnomah, Washington, and Clackamas. CareMark intended to market its services to Medicare supplemental insurers and to employer retiree groups as well as to individual beneficiaries. CareMark proposed that individual beneficiaries enrolling in the PPO pay a $10 copayment (as opposed to a 20-percent coinsurance) for physician office visits and a reduced coinsurance of 15 percent for surgical procedures. In addition, the Medicare Part B deductible would be waived and CareMark physicians would accept assignment.

Status: Because of a decline in its physicians' interest to participate and of its having undergone some internal staffing changes, CareMark withdrew from the demonstration, effective June 1, 1990.

Project No.: 95-C-99341/9
Period: January 1989-December 1991
Funding: $ 10,205
Award: Cooperative Agreement
Awardee: Blue Cross and Blue Shield of Arizona
2444 West Las Palmaritas Drive
P.O. Box 13466
Phoenix, Ariz. 85002-3466
Project Officer: Cynthia K. Mason
Division of Hospital Experimentation

Description: Blue Cross and Blue Shield of Arizona is 1 of the 5 preferred provider organization (PPO) demonstration sites selected to participate in the Medicare physician PPO pilot demonstration. The service areas of the demonstration are Maricopa and Pima Counties, which include Phoenix, Scottsdale, and Tucson. Blue Cross and Blue Shield of Arizona is offering the PPO option, Senior Preferred, under its current Medicare supplemental insurance program. The Senior Preferred option will be available to all beneficiaries in the demonstration areas for a lower premium than that offered under Blue Cross and Blue Shield of Arizona's traditional Medicare supplemental insurance program.

Status: Blue Cross and Blue Shield of Arizona began marketing the Senior Preferred option in Fall 1988. Evaluation of the demonstration site began January 1, 1990. As of August 1990, 5,700 beneficiaries had enrolled in the Senior Preferred plan.

Evaluation of the Physician Preferred Provider Organization Demonstration

Project No.: 500-87-0028
Period: June 1989-December 1993
Funding: $ 730,929
Award: Technical Support:
Evaluation of Demonstrations
(See page 76)

Contractor: Mathematica Policy Research, Inc.
600 Maryland Avenue, SW., Suite 500
Washington, D.C. 20024-2512
Project Officer: Victor G. McVicker
Division of Hospital Experimentation

Description: In January 1989, five preferred provider organizations (PPOs) were selected to participate in the Medicare physician PPO pilot demonstration. Site selection included:

- Blue Cross and Blue Shield of Arizona, Phoenix.
- HealthLink, Inc., St. Louis, Missouri.
- CareMark, Inc., Portland, Oregon.
- Family Health Plan, Bloomington, Minnesota.
- CAPP CARE, Inc., Fountain Valley, California.

The purpose of evaluating the pilot demonstration is to assess the operational feasibility of the Medicare physician PPO concept. To facilitate this assessment, the implementation and operational experience of the pilot PPOs will be evaluated comprehensively using case study methods. The assessment will include an analysis of biased selection and beneficiary choice and the impact of the demonstration on Medicare costs and utilization of each site. Because each site is a unique model, the contractor, Mathematica Policy Research, Inc., will examine the unique features of each site and will look at how these features contribute to the success of the site. Mathematica will also examine several crosscutting issues to assess the operational feasibility of the Medicare physician PPO concept.

Status: Blue Cross and Blue Shield of Arizona and CAPP CARE implemented the demonstration in January 1990 and March 1990, respectively. Family Health Plan is still in the developmental phase. CareMark and HealthLink withdrew from the demonstration. In August 1990, Mathematica submitted the first status report for this project. It consisted of two parts. The first was the final report on Blue Cross and Blue Shield of Arizona. The second was a combined draft report on HealthLink, CareMark, CAPP CARE, and Family Health Plan.

Medicare Cataract Surgery Alternate Payment Demonstration

Project No.: 500-87-0030
Period: July 1989-December 1994
Funding: $ 602,845
Award: Technical Support:
Evaluation of Demonstrations
(See page 76)
Contractor: Abt Associates, Inc.
55 Wheeler Street
Cambridge, Mass. 02138
Project Officer: Michael Henesch
Division of Hospital Experimentation

Description: The objective of the task is to assist the Health Care Financing Administration in the design, implementation, and evaluation of a demonstration to assess the feasibility of an all-inclusive negotiated price concept for cataract surgery. The negotiated price covering physician, facility, and intraocular lens costs for the procedure would be tested at three sites, but participation by providers and beneficiaries at each site would strictly be voluntary.

Status: Abt Associates has completed the final design phase. An announcement of the three geographic areas from which demonstration participants will be selected will be made in late Fall 1990. A two-stage solicitation process, a preapplication phase to identify interested providers, and a final application process will subsequently be initiated.

Medicare Participating Heart Bypass Center Demonstration

Project No.: 500-87-0029
Period: June 1989-December 1993
Funding: $ 708,345
Award: Technical Support:
Evaluation of Demonstrations
(See page 76)
Contractor: Lewin/ICF
1090 Vermont Avenue, NW.
Washington, D.C. 20005
Project Officer: Armen H. Thoumaian
Division of Hospital Experimentation

Description: The task's objective is to assist the Health Care Financing Administration (HCFA) in implementing and evaluating a 3-year demonstration designed to assess the feasibility of a negotiated all-inclusive pricing arrangement for coronary artery bypass graft surgery while maintaining high-quality care. Lewin/ICF will assist HCFA in preparing an evaluation and implementation plan, monitoring the demonstration sites, collecting and analyzing data, and preparing the final evaluation report.

Status: The demonstration design and the solicitation of interested hospitals were completed prior to the award of this contract. Of the 206 hospitals that submitted preapplications, a review panel recommended that 42 hospitals be invited to submit demonstration applications by June 1989. Of the 27 applications that were received, an application review panel has recommended 10 finalists for further consideration. HCFA will negotiate with the finalists and will select 4 demonstration sites. HCFA expects to announce site awards in Fall 1990, with implementation of the demonstration scheduled for early 1991. Lewin/ICF is currently preparing the evaluation methodology as well as various implementation plans.

Physician Reaction to Price Changes

Project No.: 500-89-0050
Period: September 1990-September 1991
Funding: $ 170,870
Award: Contract
Contractor: Health Economics Research, Inc. (HERI)
Hillsite Office Building
75 Second Avenue, Suite 100
Needham, Mass. 02194

Project Officer: Nancy T. McCall
Division of Reimbursement and Economic Studies

Description: The response of physicians to price changes is a critical issue, especially as Medicare moves to a fee schedule that redistributes fees among types of services and among areas of the country. It has widely been assumed that physicians react to price reductions in some fashion. The reaction could be manifest with providing a different quantity of the same service or of another service, changing billing practices, or changing practices regarding reporting of services. Reductions in Medicare payment amounts for overpriced procedures in the Omnibus Budget Reconciliation Acts (OBRA) of 1986 and 1987 give regulators an opportunity to analyze physicians' reaction to price reductions. Effective January 1, 1987, OBRA 1986 reduced Medicare's prevailing charges for cataract surgery by 10 percent, subject to a floor at 75 percent of the national average charge. OBRA 1987 reduced Medicare's prevailing charges for 12 procedures (38 specific Current Procedural Terminology-4 codes) by 2 percent and further reduced prevailing charges by a sliding scale from 0 to 15 percent, depending on the relationship of the locality prevailing charge to the national average. The researchers will produce a descriptive analysis of utilization of the overpriced procedures between 1985 and 1989 on a procedure-specific quarterly-pricing locality basis. The data for this analysis will be a multi-State 100 percent claims data base. Researchers will also perform a descriptive analysis of trends in episodes of care. This analysis will identify changes in the provision of overpriced procedure-related services that the physician may alter in response to the price reduction. The data for this latter analysis are the 1985-1989 beneficiary Part B Medicare Annual Data; Health Insurance Skeleton Eligibility Writeoff; Medicare provider analysis and review-Office of Research and Demonstrations (ORD) linked files.

Status: The project is in the early developmental stage.

Medicaid Fees and Physician Participation

Project No.: 500-89-0054
Period: September 1990-September 1991
Funding: $ 288,146
Award: Contract
Contractor: The Urban Institute
Health Policy Center
2100 M Street, NW.
Washington, D.C. 20037
Project Officer: Sydney P. Galloway
Office of Operations Support
Mandate: Omnibus Budget Reconciliation Act of 1989
(Public Law 101-239)

Description: The purpose of this project is to:

- Collect recent data on Medicaid fee levels.
- Compare these levels with present Medicare fees, fees of other private payers, and the Medicare fee schedules enacted by the Omnibus Budget Reconciliation Act of 1989.
- Examine the relationship between these fee levels and physician participation in Medicaid.

Status: The project is in the early developmental stage.

Other Physician Studies

Characteristics of Medicare Physicians: Early Returns from the Unique Physician Identifier Number Data

Funding: Intramural
Project Directors: C. McKeen Cowles and Benson L. Dutton
Division of Economic and Reimbursement Studies

Description: The Consolidate Omnibus Budget Reconciliation Act of 1985 (Public Law 99-272) gives the Secretary of Health and Human Services authority to establish a system of unique identifiers for each physician billing for Medicare services. Unique physician identifier numbers (UPINs) are needed for program integrity and monitoring, quality assurance, and research and policy analyses. Prior to this legislation, Medicare carriers independently assigned physician billing numbers suitable for local bill and claims processing systems. These numbers might have represented a single physician, a part of one physician's practice, or many physicians if the number was a group's billing number. Data from the January 1990 UPIN file were used to determine the number of Medicare physicians and to describe their characteristics. The Social Security Act defines doctors of medicine and osteopathy, dentists, optometrists, podiatrists, and chiropractors as physicians for Medicare payment purposes.

Status: The first phase of this project has been completed. A paper entitled "Medicare Physicians—Who They Are and How They Practice" will be presented at the American Public Health Association Conference in New York on October 1, 1990. As of January 1, 1990, the Bureau of Program Operations had successfully identified 515,414 physicians who bill for Medicare services. Carriers identified, on average, 1.9 practice settings per physician. Doctors of medicine and osteopathy tended to practice in more than 1 setting while only 16 percent of other practitioners billed in more than 1 setting. Over the next year the Bureau of Data Management and Strategy and the Office of Research of the Office of Research and Demonstrations will update the descriptive statistics to 1991. Utilization and expenditure data for several States for which UPINs have been matched to carrier billing numbers will be analyzed.

Individual Practice Association Physician Relationships

Project No.: 99-C-98526/1
Period: July 1988-July 1990

Funding: $ 78,622
Award: Cooperative Agreement
Awardee: Brandeis University Research Center
(See page 73)
Project Officer: Sherry A. Terrell
Division of Reimbursement and Economic Studies

Description: One of the fastest growing types of capitated systems is the individual practice association (IPA). IPAs now include half of the health maintenance organization (HMO) enrollment and are expected to dominate the HMO market in the future. Types of IPAs include all IPA physicians in one risk pool, an individual physician at risk, and a medical group practice at risk. The purpose of this study was to investigate the arrangement that IPAs have with physicians in order to develop policy options for Medicare.

Status: A final report, "Giving Physicians Incentives to Contain Costs Under Medicare: Lessons from Medicaid," is available from the National Technical Information Service (NTIS), accession number PB89-238109. A number of State Medicaid plans were identified that have designed innovative payment systems incorporating incentives for physicians to control costs. The report summarizes partial capitation and health insuring organization risk arrangements in seven Medicaid programs—Oregon, Santa Barbara, San Mateo, Philadelphia, Kitsap, Washington, and Monterey. The final project task, development of a typology for HMOs that reflects financial incentives to physicians, is complete. Two alternative typologies were considered—one that classifies IPAs by how physicians are paid (i.e., by salary, capitation, or fee for service) and the other by the number of tiers or levels of organization between the payer and the physician provider. Both typologies better distinguish HMOs by performance measures, such as specialty visits per enrollee and enrollment growth, than do current classification systems. The final report entitled "Toward a Typology of HMOs Reflecting Financial Incentives to Physicians," accession number PB90-161050, is also available from NTIS.

Determinants of Cost of Care: The Influence of Physician Style Versus Patient Characteristics

Project No.: 99-C-99169/5
Period: September 1988-July 1991
Funding: $ 164,257 (Assistant Secretary for Planning and Evaluation funded project)
Award: Cooperative Agreement
Awardee: University of Minnesota Research Center
(See page 75)
Project Officer: William Buczko
Division of Reimbursement and Economic Studies

Description: Significant variations in the cost of managing patients with the same diagnosis have been documented. For approximately 400 patients with acute myocardial infarctions, this study will help determine what percent of variance in the cost of care is caused by the physicians' unique practice patterns and what percent is caused by differences in patient population characteristics and disease severity. Methods will also be developed to explore the relationships among disease severity, comorbidity, and resource use in the specific care of Medicare patients with myocardial infarctions.

Status: Researchers have completed collecting supplementary chart data. The merged study data file is currently being created and data analysis will begin once the file is built.

Physician Payment Differentials by Board Certification Status

Project No.: 99-C-99168/3
Period: August 1989-July 1990
Funding: $ 77,300
Award: Cooperative Agreement
Awardee: Project HOPE Research Center
(See page 74)
Project Officer: Alvin L. Freedman
Division of Reimbursement and Economic Studies

Description: The purpose of this project is to examine the nature and extent of physician payment differentials in health care settings where physicians are salaried. Phase I of the project will examine physician payment mechanisms in staff-model health maintenance organizations (HMOs). Phase II will explore payment mechanisms in physician employment settings other than HMOs.

Status: Phase I results were submitted to the Health Care Financing Administration in December 1989. These results indicate that years of experience was the most predominant criterion for determining physician salary differentials in HMO settings. Survey materials for Phase II have been developed.

Physician Income Over Time

Project No.: 99-C-98526/1
Period: August 1989-July 1991
Funding: $ 59,537
Award: Cooperative Agreement
Awardee: Brandeis University Research Center
(See page 73)
Project Officer: Michael Borowitz
Division of Reimbursement and Economic Studies

Description: This project will use the 1975, 1978, 1984-85, and 1989 Physicians' Practice Costs and Income Surveys to examine the change in physician income over time. Previous research has indicated that physician average real income has shown little growth over the past decade. However, the changing mix of physician characteristics (e.g., by age, sex, and specialty) has not been addressed nor have changes in physician workload. Investigators will control for

changes in physician characteristics and physician workloads to see whether physician real income has changed over the last decade.

Status: This project is still in the developmental stage.

Designing a Study of Components of the Dialysis Monthly Capitation Payment

Project No.: 99-C-98489/9
Period: September 1990-August 1991
Funding: $ 50,443
Award: Cooperative Agreement
Awardee: The RAND Policy Research Center
(See page 72)
Project Officer: Lawrence E. Kucken
Division of Beneficiary Studies

Description: The aim of this project will be to develop a design for a study of the types, frequency, and settings of physician services provided to Medicare dialysis patients. In designing the study, RAND will develop data collection and sampling strategies. The study design will allow for three basic kinds of analyses—analysis of the care provided to dialysis patients, analysis of variations in the bundle of physician services provided, and analysis of selected outcome measures.

Status: This project is in the early developmental stage.

Ambulatory Cardiac Monitoring

Project No.: 99-C-99169/5
Period: August 1990-July 1991
Funding: $ 100,000
Award: Cooperative Agreement
Awardee: University of Minnesota Research Center
(See page 75)
Project Officer: Michael Borowitz
Division of Reimbursement and Economic Studies

Description: The primary goals of this project are to develop and pilot test an instrument which collects supplemental data from physician providers to guide the Health Care Financing Administration in reimbursing ambulatory cardiac monitoring and to design a large-scale intervention to assess the feasibility of obtaining this information from providers on a routine basis.

Status: This project is in the early developmental stage.

Effectiveness of Ambulatory Cardiac Monitoring

Project No.: 99-C-98489/9
Period: August 1990-July 1991
Funding: $ 80,000
Award: Cooperative Agreement
Awardee: The RAND Policy Research Center
(See page 72)
Project Officer: Michael Borowitz
Division of Reimbursement and Economic Studies

Description: This project will expand the previous meta-analytic study of the effectiveness of ambulatory cardiac monitoring (ACM) conducted by the Technology Assessment Group at Harvard University. The purpose of the study will be to carry out additional meta-analyses to explore the effectiveness of ACM for specific diagnostic uses. Researchers will develop models for decision analysis for determining the appropriate use of ACM for each of the clinical indications being studied.

Status: This project is in the early developmental stage.

Computer-Assisted Test Interpretation

Project No.: 99-C-99169/5
Period: August 1990-July 1991
Funding: $ 49,931
Award: Cooperative Agreement
Awardee: University of Minnesota Research Center
(See page 75)
Project Officer: C. McKeen Cowles
Division of Reimbursement and Economic Studies

Description: This project will design a plan to:

- Identify diagnostic tests (in addition to electrocardiograms) for which computers can be used to interpret test results and estimate the total and average amount of Medicare payments and volumes for these interpretations.
- Analyze the extent to which computerized interpretations for these tests are used in the hospital setting.
- Assess the extent to which a physician reviews the computerized interpretation and the interpreting physician makes a written report.
- Assess the impact of computer interpretations on quality and physician productivity.

Status: This project is in the early developmental stage.

Outpatient Care

New York State Products of Ambulatory Care Reimbursement Project

Project No.: 11-C-98574/2
Period: September 1984-August 1990
Funding: $ 1,263,788
Award: Cooperative Agreement
Awardee: New York State Department of Social Services
40 North Pearl Street
Albany, N.Y. 12243
Project Officer: Joseph M. Cramer
Division of Hospital Experimentation

Description: The New York State Department of Social Services and the Office of Health Systems Management within the New York State Department of Health jointly

submitted this proposal. The purpose of the project was to develop and test a prospective ambulatory care payment methodology for both freestanding clinics and hospital-based ambulatory care services that would be predicated on a uniform cost comparison by a patient-care service classification. The project's activities were divided into 3 major stages:

- Development of a patient-care classification system that associates relative resource use with patient and service characteristics in homogeneous product groups.
- Creation of payment rates.
- Demonstration and evaluation of the new system.

New York proposed the development of 2 separate ambulatory classification systems—1 for medical services known as the products of ambulatory care (PAC) and 1 for surgery services known as the products of ambulatory surgery (PAS).

Status: The PAC payment methodology was implemented for Medicaid in 2 test areas in 17 facilities. The 3-year Medicaid waiver expired July 31, 1990. The State has continued the PAC payment system at the 17 facilities as part of its State Medicaid Plan. In addition, the State of New York has received funding to examine the costs of ambulatory surgery services and has developed a case-mix adjusted ambulatory surgery classification and prospective payment methodology. Furthermore, it has developed 42 patient categories under PAS. Effective June 1, 1989, PAS became the statewide basis for New York's State Medicaid program to pay for ambulatory surgery in hospitals and in freestanding surgery centers. The major and continuing activity during the sixth and final year of the project was the recalibration of the PAC case-mix values and the facility component in the PAC pricing formula used to update and refine the prospective payment amounts. The project's evaluation task continued to assess the validity of the PAC system and to measure the impact of the demonstration on the cost, availability, and organization of ambulatory care rendered in hospitals and in freestanding clinics. New York is conducting special studies related to the measurement of patient noncontact time and graduate medical education and continues to monitor provider participation in the demonstration for trends and possible negative impacts. Legislation was enacted in the State of New York to incorporate the PAC system statewide effective January 1, 1991, for ambulatory care providers that meet the criteria as preferred primary care providers. The State has also requested a 1-year extension of its 6-year grant for activities that represent a refinement or expansion of previously funded work.

Evaluation of New York State Products of Ambulatory Care Demonstration Project

Project No.: 500-87-0030
Period: June 1988-June 1991
Funding: $ 249,935
Award: Technical Support: Evaluation of Demonstrations
(See page 76)
Contractor: Abt Associates, Inc.
4800 Montgomery Lane
Bethesda, Md. 20814
Project Officer: Joseph M. Cramer
Division of Hospital Experimentation

Description: The purpose of this project is to design and implement an evaluation of the New York State Products of Ambulatory Care (PAC) Reimbursement Project, which will build on and supplement New York State's own evaluation plan. Its primary focus will be to evaluate the New York State PAC patient classification system and payment methodology by using the PAC evaluation data set that is being collected from 17 demonstration sites. The project will also assess the PAC system for Medicare application and will identify other ambulatory care data sources (i.e., other States) and assess their appropriateness for simulated application to the PAC patient classification and payment system.

Status: Abt Associates is continuing to correct problems in the data of the New York State PAC evaluation data set and is building the analytic file. Information from this file will be used to prepare the case study and data analysis reports for the Office of Research and Demonstrations.

Toward Prospective Payment for Outpatient Department Surgical Services

Project No.: 17-C-99019/3
Period: June 1987-June 1991
Funding: $ 960,254
Award: Cooperative Agreement
Awardee: The Urban Institute
Health Policy Center
2100 M Street, NW.
Washington, D.C. 20037
Project Officer: Thomas Talbott
Division of Hospital Experimentation
Mandate: Omnibus Budget Reconciliation Act of 1986
(Public Law 99-509)

Description: This project will provide information necessary to assist the Health Care Financing Administration (HCFA) in designing a prospective payment system for surgical procedures performed on a hospital outpatient basis. The project is composed of 5 major tasks:

- Creating a specialized data base by merging 4 data sets (i.e., the 5-percent outpatient bill skeleton file, the Part B Medicare Annual Data (BMAD) beneficiary file, the Medicare provider analysis and review file, and the Hospital Cost Report Information System file) from the Medicare Statistical System. The new data base will contain information on facility costs, physician-covered charges, and

Medicare reimbursement for similar surgical services across 4 different settings (i.e., the hospital outpatient department (HOPD), the inpatient hospital, the ambulatory surgical center (ASC), and the physician office).
- Providing descriptive analyses on variations in costs, covered charges, and Medicare reimbursement and frequency of surgical procedures and medical visits both within the outpatient hospital setting and across different settings.
- Developing econometric models to determine facility, demographic, and market characteristics that explain differences in costs, covered charges, and Medicare reimbursement within HOPDs and between HOPDs and ASCs.
- Developing a simulation model to examine the impact of alternative ratesetting approaches on facility revenues and Medicare reimbursement.
- Defining an episode of care by creating analysis files with the episode of care as the unit of observation.

The Urban Institute (UI), in conjunction with the cooperative agreement awarded to 3M-Health Information Systems (3M-HIS), will expand the tasks to provide descriptive analyses and to develop econometric and simulation models to evaluate newly refined ambulatory patient groups (APGs).

Status: UI has created a working file for ambulatory surgery by merging information from BMAD and the 5-percent outpatient bill skeleton file. Within the file, UI has identified 115 most frequently performed procedures and has calculated cost weights for each. It has also developed a surgery-complexity index that can be used to explain hospital surgery costs. To determine how well the surgery-complexity index is related to hospital costs, certain variables (e.g., teaching, nonteaching, geographical locations, and disproportionate share) were controlled. As part of UI's original tasks established under the cooperative agreement, a preliminary evaluation of various classification systems, diagnosis-related groups, ambulatory visit groups, and products of ambulatory surgery was completed. This evaluation will be expanded to include the APGs. An analysis using BMAD data for freestanding ASCs is in progress. UI has updated the linked BMAD and 5-percent outpatient bill skeleton file using 1987 data. This file has been forwarded to 3M-HIS for assignment of the APGs. The file will then be returned to UI for evaluation. In conjunction with the development of its linked file, UI has provided HCFA with a detailed document describing the data development process and has identified within the file beneficiary patterns, growth statistics, and analysis comparing hospital characteristics and the impact on cost and charges. It has also provided HCFA with preliminary data comparing the cost and charges in the ASC with those in the HOPD. Further analysis will be completed in this area. In preparation for the APG analysis, UI is working with 3M-HIS to create the necessary data files. UI's analysis will describe the overall performance of the system, the makeup of the payment groups, and the impact of implementing the system on various types of providers.

Development of a Prospective Payment System for Hospital-Based Ambulatory Surgery

Project No.:	17-C-99026/1
Period:	July 1987-December 1990
Funding:	$ 92,903
Award:	Cooperative Agreement
Awardee:	Brandeis University Florence Heller Graduate School 415 South Street Waltham, Mass. 02254
Project Officer:	Thomas Talbott Division of Hospital Experimentation
Mandate:	Omnibus Budget Reconciliation Act of 1986 (Public Law 99-509)

Description: The purpose of this project is to provide information needed to assist in the development of a Medicare prospective payment system (PPS) for hospital outpatient surgery. This project will compare and evaluate the utility of several alternative patient classification systems—ambulatory patient groups (APGs), ambulatory visit groups (AVGs), and diagnosis-related groups (DRGs)—in classifying outpatient cases by relative resource intensity. The study data set consists of the Health Care Financing Administration's (HCFA's) 5-percent hospital outpatient bill skeleton file for 1985 with some appended hospital-specific characteristics such as size, teaching status, geographic location, and salaried status of the physician staff. The study will determine the systems' respective abilities to explain variation in resource use and will include a descriptive analysis of ambulatory surgery as well as nonsurgery cases in the sample by type of hospital (e.g., teaching status and size). The general study approach involves grouping all outpatient surgical cases in this data set into APGs, AVGs, and DRGs. Hospital-covered charges for the outpatient surgical cases will be the major measures of resource consumption and will be used as the basis to develop weights for the case-mix groups for the recommended PPS. The study will test 4 research hypotheses:

- AVGs or APGs are likely to explain resource use for ambulatory surgery better than DRGs.
- A substantial minority of the ambulatory surgery procedures will be grouped into the 2 residual DRGs—"primary diagnosis unrelated to procedure" and "primary diagnosis invalid for admission"—code numbers 468 and 469, respectively.
- Little correlation exists between resources used for inpatient procedures and those used on an ambulatory basis for the same surgical procedure.
- Development of a PPS for Medicare patients' use of ambulatory care services, including surgery, is feasible and logical. This includes developing a practical working definition of and selecting criteria for such surgery.

Brandeis University (BU), in support of the 3M-Health Information Systems (3M-HIS) research developing APGs, will provide 3M-HIS with a data base of hospital

outpatient claims for a prescribed period of service in fiscal year 1988. The file will include not only surgery claims, but also nonsurgery services.

Status: HCFA data have been compiled using the 1985 and 1987 data from the hospital outpatient files. Analysis of the data indicates that DRGs are not useful as a classification system for hospital outpatient surgery. Analysis of the 1987 data indicates that:

- 25 AVGs account for approximately 75 percent of all surgical visits and 80 percent of all surgical charges.
- Minor grouping problems existed that caused surgical AVGs to be misgrouped into medical AVGs. The main reason for the misgrouping was that the AVG program was developed in 1985 and has not been updated to reflect changes in the *Current Procedural Terminology, 4th Edition* coding system.
- Weights were developed for approximately 190 AVGs which account for 93.4 percent of all the dollar volume for hospital outpatient ambulatory surgery.
- The coefficients of variations (CVs) for AVGs are lower than the CVs for inpatient DRGs.

BU has updated the hospital outpatient file using claims paid and processed for a 2-week period in October 1988. This update will provide additional coding needed for the analysis of the APG classification system. BU has divided the file in half and has forwarded one half of the file to 3M-HIS, which has grouped the coded claims into the designated APG groups. The file will be returned to BU to evaluate the validity of each grouping and the soundness of the system. BU's findings will be returned to 3M-HIS for purposes of refining the system and for including relevant portions of its findings in the 3M-HIS report on the PPS for outpatient care.

Design and Evaluation of a Prospective Payment System for Ambulatory Care

Project No.: 17-C-99369/1
Period: February 1989-January 1991
Funding: $ 550,000
Award: Cooperative Agreement
Awardee: 3M-Health Information Systems
100 Barnes Road
Wallingford, Conn. 06492
Project Officer: Joseph M. Cramer
Division of Hospital Experimentation
Mandate: Omnibus Budget Reconciliation Act of 1986
(Public Law 99-509)

Description: The purpose of this project is to develop a patient classification system that can be used as the basis of payment for an outpatient prospective payment system for Medicare. The payment system must be administratively feasible, implemented with Medicare claims data, and applicable as a basis of payment for facility costs and potentially for physician fees. Another task of the project is to develop a system that can be used for the prospective payment of ambulatory care services in both hospitals and ambulatory surgical centers (ASCs). The major objectives of this project are to:

- Develop ambulatory patient groups (APGs) as a classification system using Medicare outpatient data from hospitals and ASCs.
- Develop APGs that include all nonphysician outpatient facility services in the Medicare claims data and reduce the number of groups.
- Simulate the effects of the APG system as part of developing recommendations for the preferable payment system.
- Create APG systems that include facility payments only.
- Provide analysis and information on prospective payment for outpatient care that will be incorporated in a Report to Congress.

Status: 3M-Health Information Systems (3M-HIS) has finished development of the first complete set of APGs along with a first set of payment weights. There are 280 APGs, including 149 surgical, 48 ancillary, and 83 medical. The surgical procedure and ancillary test APGs are based on *Current Procedural Terminology, 4th Edition* codes and the medical visit APGs are based on *International Classification of Diseases, 9th Revision* diagnosis codes. The APGs will be compatible with both hospital outpatient departments and ASCs. The evaluation of the APG system by Brandeis University and the Urban Institute has begun. This includes analysis of bundling ancillary tests with surgical and medical visits. 3M-HIS will describe its research findings in a technical report to be submitted by January 1991.

Exploring Hospital Outpatient Department Physician Services

Project No.: 99-C-98526/1
Period: August 1989-July 1991
Funding: $ 75,996
Award: Cooperative Agreement
Awardee: Brandeis University Research Center
(See page 73)
Project Officer: Sherry A. Terrell
Division of Reimbursement and Economic Studies

Description: The purpose of this project is to identify the utilization patterns and characteristics of Medicare beneficiaries receiving services in the hospital outpatient department (HOPD).

Status: Data analyses are in progress using a merged calendar year 1987 5-percent beneficiary hospital outpatient skeleton file and Part B Medicare Annual Data. These files provide a link of facility claims with physician claims. Findings show that:

- The average Medicare beneficiary made 2.3 visits to the HOPD in 1987.
- The average allowed charge per beneficiary increased with the number of visits and the average charge per visit fell over the year.

- The average Medicare beneficiary is billed by 2.3 different providers (billing numbers) in the HOPD per year.

A final report is expected in July 1991.

Capitated Payment Systems

Refinements to the Adjusted Average Per Capita Cost

Determination of Health Maintenance Organization Capitation Rates for Medicare Beneficiaries

Project No.: 17-C-98804/9
Period: September 1985-August 1989
Funding: $ 1,046,935
Award: Cooperative Agreement
Awardee: Kaiser Foundation Research Institute
3505 Broadway, Suite 1112
Oakland, Calif. 94611
Project Officer: Gerald F. Riley
Division of Beneficiary Studies

Description: The purpose of this project was to investigate the issue of biased selection into health maintenance organizations (HMOs) and the problem of developing a risk-adjustment methodology for HMO payments by using internal data from the Kaiser Foundation Research Institute and data from the Bureau of Data Management and Strategy's Medicare Statistical System. The investigator's specific aims were to:

- Predict health care costs for groups of stayers and switchers in the fee-for-service sector and an HMO (Kaiser Permanente) and to estimate the degree of selection bias, if any, among HMO enrollees.
- Simulate Medicare capitation rates for an HMO using alternative risk-adjustment methods and compare these rates with the current adjusted average per capita cost (AAPCC) rate.
- Develop and test a risk-adjustment methodology employing cause-specific mortality and hospital morbidity for predicting future aggregate use of medical care services by Medicare beneficiaries enrolled in an HMO.
- Examine the implications of a separate reinsurance program for case-specific expenses above a specified level of alternative risk-adjusted capitation methods.
- Develop a risk-adjustment methodology by using ambulatory morbidity and self-perceived health status for predicting future aggregate use of medical care services by Medicare beneficiaries enrolled in an HMO.

Status: A paper entitled "Adjusting the AAPCC for Selectivity and Selection Bias under Medicare Risk Contracts" was published in *Advances in Health Economics and Health Services Research*, Vol. 10, pp. 111-149. JAI Press Inc., 1989. The final report and other papers are expected in late 1990.

A Selectivity Bias Correction for the Medicare Adjusted Average Per Capita Cost

Project No.: 17-C-99040/5
Period: June 1987-October 1990
Funding: $ 499,601
Award: Cooperative Agreement
Awardee: University of Minnesota School of Public Health
420 Delaware Street, SW., Box 729
Minneapolis, Minn. 55455
Project Officer: Gerald F. Riley
Division of Beneficiary Studies

Description: The primary objective of the project is to develop a methodology for producing unbiased estimates of the degree of biased selection present among health maintenance organization (HMO) enrollees. The project will go beyond current studies of biased selection by correcting for unobserved as well as observed characteristics of beneficiaries that influence both the beneficiaries' choices of health plan (i.e., HMO or fee for service) and the subsequent amount of resources consumed. The model will produce an unbiased estimate of what a group of HMO enrollees would have cost if they had remained in fee for service; this is how the adjusted average per capita cost is defined.

Status: Researchers have completed beneficiary interviews and have collected claims data for the 12 months following the beneficiary interviews. The project was extended for 15 months to allow time for a full set of claims data to accumulate. The final report is expected in January 1991.

Geographic Variation and Long-Run Capitation Ratesetting for Medicare Expenditures

Project No.: 99-C-98526/1
Period: January 1987-July 1989
Funding: $ 95,274
Award: Cooperative Agreement
Awardee: Brandeis University Research Center
(See page 73)
Project Officer: James C. Beebe
Division of Beneficiary Studies

Description: At present, Medicare capitation payments for enrollees in health maintenance organizations are set at a level that reflects existing geographic variations in the fee-for-service payment system. An ideal financing system would reflect geographic differences that are attributable to the cost of delivering appropriate health care services while not reflecting differences in styles of practice that are not associated with health outcomes. This research decomposed geographic variation into components attributable to:

- Differences in input prices.
- Differences in the health status of the population.
- Differences in medical practice associated with local supply structures.
- Unspecified factors associated with differences in medical practice patterns.

These components will be incorporated into a model that could serve to modify Medicare capitation rates.

Status: Analysis and model-building activities are under way. A draft report describing the relationship between discretionary admissions and utilization measures has been received in the Office of Research and Demonstrations and is being reviewed. The final report providing an econometric analysis of geographic variations in ratesetting is expected by Spring 1991.

Examination of Alternatives to the Adjusted Average Per Capita Cost Geographic Factor

Project No.: 99-C-98526/1
Period: August 1989-July 1991
Funding: $ 59,885
Award: Cooperative Agreement
Awardee: Brandeis University Research Center
(See page 73)
Project Officer: James C. Beebe
Division of Beneficiary Studies

Description: The geographic adjuster of the adjusted average per capita cost (AAPCC) is currently a moving 5-year average of the ratio of county costs to national costs. The most recent data entering the 5-year average are 3 years old and the oldest data are 8 years old. Thus, the data used in this approach may not accurately reflect a county's current status. In addition, the data can result in large random year-to-year fluctuations in the local AAPCCs and can dampen any trends toward increasing or decreasing relative costs in an area. More sophisticated time series methods, which may give a more accurate estimate of counties' current costs relative to national costs and Bayesian methods of reducing random fluctuations by combining county data with data from a larger area, will be investigated.

Status: A report on a variety of techniques that will be tried was submitted to the Office of Research and Demonstrations. The current 5-year moving average will be compared with:

- A final 3-year moving average model.
- A 5-year double moving average model.
- A double exponential smoothing model.
- A shrinkage (Bayesian) estimator.
- A fixed baseline geographic index.

A final report is expected in 1991.

Evaluation of Diagnostic Cost Group Pilot Demonstration

Project No.: 500-87-0028
Period: September 1988-November 1990
Funding: $ 118,303
Award: Technical Support: Evaluation of Demonstrations
(See page 76)
Contractor: Mathematica Policy Research, Inc.
600 Maryland Avenue, SW., Suite 550
Washington, D.C. 20024
Project Officer: Ronald W. Lambert
Division of Health Systems and Special Studies
Mandate: Omnibus Budget Reconciliation Act of 1987
(Public Law 100-203)

Description: The diagnostic cost group (DCG) methodology is an experimental health maintenance organization (HMO) payment system that could be used by Medicare in place of the adjusted average per capita cost (AAPCC) formula currently in use. Unlike the existing AAPCC, which uses only demographic information for setting premium payments to HMOs, the DCG method also uses diagnostic information from the previous year's hospitalizations of the HMO's current enrollees to determine Medicare payments to the HMO for the current year. The conceptual justification for the DCG approach is that certain reasons for hospitalization are predictably associated with higher levels of future health care needs. The technical support contract consists of two phases. Phase I is the development of an experimental design for the expanded demonstration, a followup initiative to the pilot. This phase will address how the expanded demonstration is to be designed. Phase II is the pilot evaluation, which will assess the operational issues involved in conducting a demonstration of the DCG payment methodology.

Status: Phase I has been completed. A final report was received in June 1989. The pilot demonstration and Phase II began in August 1989 and continued through 1990. The final report is expected in December 1990.

Working Aged Beneficiaries: Program Impacts and Implications for the Adjusted Average Per Capita Cost

Project No.: 99-C-99168/3
Period: August 1989-July 1991
Funding: $ 65,051
Award: Cooperative Agreement
Awardee: Project HOPE Research Center
(See page 74)
Project Officer: James C. Beebe
Division of Beneficiary Studies

Description: Because Medicare is the secondary payer for aged persons who are covered by employer medical insurance, the Health Care Financing Administration does not get complete data on the beneficiaries' medical care use and costs. As a result, the health care costs for the working aged are not fully reflected in the calculations that are made to generate the capitated payments to health maintenance organizations (HMOs) under Medicare. HMOs believe that the lack of complete data on the working aged individuals unfairly lowers their capitation rates for all enrollees, given the current method for computing the rates. The Regional Data Exchange System files that will be developed by Project HOPE will be used with the National Medical Expenditure Survey (NMES) to attempt to determine the

legitimacy and magnitude of the problem and to identify corrective measures that may be necessary.

Status: The public-use NMES files are not yet available. The project is on hold until the files are available.

Impacts of the Working Aged on Medicare Expenditure Rates

Project No.: 99-C-98526/1
Period: August 1989-July 1990
Funding: $ 54,774
Award: Cooperative Agreement
Awardee: Brandeis University Research Center
(See page 73)
Project Officer: James C. Beebe
Division of Beneficiary Studies

Description: Because Medicare is the secondary payer for aged persons who are covered by employer medical insurance, the Health Care Financing Administration does not get complete data on the beneficiaries' medical care use and costs. As a result, the health care costs for the working aged are not fully reflected in the calculations that are made to generate the capitation payments to health maintenance organizations (HMOs) under Medicare. HMOs believe that the lack of complete data on the working aged individuals unfairly lowers their capitation rates for all enrollees, given the current method for computing the rates. The Regional Data Exchange System files that will be developed by Project HOPE will be used with the Current Population Survey from the U.S. Bureau of the Census to attempt to determine the legitimacy and magnitude of the problem and to identify any corrective measures in the ratesetting process that may be necessary.

Status: The 1988 Current Population Survey was used to estimate the percent of the aged population covered by employer insurance. The final report is expected in Spring 1991.

Medicare Insured Groups

Amalgamated Medicare Insured Group

Project No.: 95-C-99171/2
Period: October 1987-December 1990
Funding: $ 168,746
Award: Cooperative Agreement
Awardee: Amalgamated Life Insurance Company
770 Broadway
New York, N.Y. 10003
Project Officer: Ronald W. Deacon
Division of Health Systems and Special Studies
Mandate: Omnibus Budget Reconciliation Act of 1987
(Public Law 100-203)

Description: The Amalgamated Medicare Insured Group (AMIG) is being developed by the Amalgamated Life Insurance Company, administrators of trust funds for the Amalgamated Clothing and Textile Workers Union. The AMIG project will unify all aspects of program administration, including Medicare Parts A and B and Medicare supplemental benefits under the auspices of Amalgamated Life. Funding will be provided through a capitated rate paid by the Health Care Financing Administration, employer contributions, and enrollee premiums. By using managed health care systems and provider negotiation leverage resulting from a large retiree population, the AMIG is expected to reduce the cost to all payers.

Status: The AMIG plans to begin the project in Philadelphia, Pennsylvania, where enrollment will be offered to approximately 8,000 retirees and spouses residing in the area. The AMIG anticipates that enrollment will reach 1,000 within the first year of operation, reaching 3,500 by the end of the demonstration. If the concept proves successful, Amalgamated Life expects to add other sites to the demonstration. Possible sites are New York City, New York, and Baltimore, Maryland.

Southern California Edison Company Medicare Insured Group Research and Demonstration Project

Project No.: 95-C-99355/9
Period: February 1989-March 1991
Funding: $ 195,825
Award: Cooperative Agreement
Awardee: Southern California Edison Company
8631 Rush Street
Rosemead, Calif. 91770
Project Officer: Ronald W. Deacon
Division of Health Systems and Special Studies
Mandate: Omnibus Budget Reconciliation Act of 1987
(Public Law 100-203)

Description: Southern California Edison (SCE) is a self-insured employer offering health benefits to its retired employees. It operates eight primary care clinics and a large corporate pharmacy. During the feasibility phase of this project, SCE will analyze the historical costs of providing Medicare and supplemental benefits to its retirees and eligible dependents. The information will be used by SCE to develop experienced-based payment rates which will be reviewed by the Health Care Financing Administration. SCE will develop a retiree benefit package, an encounter data reporting system, and a marketing plan to voluntarily enroll as many retirees as possible.

Status: SCE is currently developing a ratesetting methodology and is analyzing historical utilization patterns using Medicare claims data. By December 1990, SCE plans to determine if the Medicare insured group concept is feasible and, if so, will proceed to develop operational procedures to begin a demonstration by January 1993.

John Deere and Company Medicare Insured Group Research and Demonstration Project

Project No.: 95-C-99624/5
Period: August 1990-August 1991
Funding: $ 156,421
Award: Cooperative Agreement
Awardee: John Deere and Company
John Deere Road
Moline, Ill. 61265
Project Officer: Ronald W. Deacon
Division of Health Systems and Special Studies
Mandate: Omnibus Budget Reconciliation Act of 1987
(Public Law 100-203)

Description: John Deere and Company (Deere) will conduct an initial feasibility study, which includes collecting and analyzing historical trends of the cost and use of Medicare and Deere supplemental retiree benefits. If Deere determines that the Medicare insured group (MIG) concept is a financially feasible venture, it will design the specifics of the MIG demonstration, including the eligible retiree population, benefit package, ratesetting methodology, and qualification of the health care delivery system.

Status: The project is in the early developmental stage.

Health Maintenance Organizations and Competitive Medical Plans Evaluation and Monitoring

Medicare Payments to Health Maintenance Organizations: Beyond a Local Fee-For-Service Methodology

Project No.: 17-C-99223/3
Period: August 1989-July 1991
Funding: $ 126,770
Award: Cooperative Agreement
Awardee: The Urban Institute
Health Policy Center
2100 M Street, NW.
Washington, D.C. 20037
Project Officer: James C. Beebe
Division of Beneficiary Studies

Description: This project will investigate whether favorable selection by health maintenance organizations (HMOs) in areas of high HMO penetration affects the health status and cost of those Medicare beneficiaries remaining in the fee-for-service sector. If it does, capitation rates set for HMO enrollees may be too high. If such an effect is found, alternatives to current methods for setting capitation rates in high-penetration areas will be explored.

Status: Preliminary findings indicate that HMO enrollment decreases Medicare expenditures. The project has been extended through June 1991 to validate these findings and to complete the analysis of alternative methods.

Open-Ended Health Maintenance Organizations and Medicare

Project No.: 99-C-99169/5
Period: August 1990-July 1991
Funding: $ 40,500
Award: Cooperative Agreement
Awardee: University of Minnesota Research Center
(See page 75)
Project Officer: Rosita McKee
Division of Health Systems and Special Studies

Description: A recent innovation in the health maintenance organization (HMO) industry is the "open-ended," or "point-of-service," HMO. This project will:

- Describe how open-ended HMOs are structured in the private sector.
- Describe how open-ended HMOs might be structured under Medicare.
- Assess how open-ended HMOs might be coupled with various behavioral incentives to affect utilization, costs, and outcomes.
- Identify major changes in present Health Care Financing Administration payment and administrative structures that would be required for Medicare to incorporate the open-ended option in a managed care system.
- Assess the regulatory constraints States are likely to impose on open-ended options and how these constraints affect the offering of open-ended products by HMOs contracting with Medicare.
- Discuss the issues that would need to be addressed in designing a demonstration for Medicare open-ended HMOs.

Status: This project is in the early developmental stage.

Tax Equity and Fiscal Responsibility Act of 1982 Health Maintenance Organization and Competitive Medical Plan Program Evaluation

Project No.: 500-88-0006
Period: February 1988-February 1992
Funding: $ 3,509,701
Award: Contract
Contractor: Mathematica Policy Research, Inc.
P.O. Box 2393
Princeton, N.J. 08543
Project Officer: James P. Hadley
Division of Health Systems and Special Studies
Mandate: Omnibus Budget Reconciliation Act of 1987
(Public Law 100-203)

Description: The evaluation, which will be conducted over a period of 4 years, is designed to examine the

impact of the Tax Equity and Fiscal Responsibility Act Health Maintenance Organization and Competitive Medical Plan (TEFRA HMO/CMP) program on the Health Care Financing Administration (HCFA), health care providers, and Medicare beneficiaries. Fifty to 100 plans are included in the evaluation, depending on the area of analysis. The primary analyses to be included in the evaluation relate to:

- The impact of health maintenance organizations (HMOs) and competitive medical plans (CMPs) on enrollee use and cost of service.
- The quality of care delivered by HMOs and CMPs.
- Factors contributing to the beneficiary enrollment decision.
- Impacts of the program on both the HMO and fee-for-service markets.
- HMO operational issues, with a focus on plan viability.

Data for the analyses will come from site visit interviews, HMO files, HCFA data files, and a beneficiary survey. Results from the evaluation will be summarized in annual reports at the end of each of the first 3 years of the study. Details of the research methodology and results will be included in a series of technical reports that relate to specific study topics.

Status: During the first 2 years of the evaluation, researchers examined the availability of HMO data systems, analyzed HMO disenrollment patterns, and provided a descriptive analysis of the HMOs participating in the TEFRA HMO/CMP program. The following reports have been produced and will be available from the National Technical Information Service in early 1991:

- "The Availability of HMO/CMP Data on the Service Utilization and Cost of Medicare Members."
- "Organizational and Operational Characteristics of TEFRA HMOs and CMPs."
- "First Annual Report on the TEFRA HMO and CMP Evaluation."
- "Biased Selection in the TEFRA HMO/CMP Program."
- "Second Annual Report on the TEFRA HMO and CMP Evaluation."

Evaluation activities for 1991 involve an examination of beneficiary choice of plan, satisfaction with care, and quality of care.

Post-Health Maintenance Organization Disenrollment Utilization Study

Funding:	Intramural
Project Director:	Ruth B. Pickard Division of Health Systems and Special Studies

Description: This study is an examination of all disenrollments from 38 risk contract health maintenance organizations (HMOs) during the first year of the Tax Equity and Fiscal Responsibility Act's implementation. Utilization experience during the months following disenrollment is being studied for indications of selective disenrollment patterns. Use, cost, and mortality data for May-December 1985 form the basis for comparisons between pre- and post-disenrollment utilization patterns of the study group and those of 2 matched comparison groups—beneficiaries having continuous HMO enrollment and those in the fee-for-service sector.

Status: Person-level files have been created from the bill-level cost and use records of beneficiaries. Taking into account prior utilization, health status, length of survival, and standard beneficiary demographic information, project staff found service costs for disenrollees to be no different in the year following disenrollment than for those in the fee-for-service sector. Those among service utilizers who joined and subsequently left these HMOs had lower costs and service intensity in the year prior to enrollment than did either the continuous enrollees or those with no HMO experience. Following disenrollment, however, the disenrollees were hospitalized more rapidly than were their fee-for-service counterparts. This evidence suggests that some beneficiaries may have left the plans in need of care. Since all enrollments in the study were brief, it is not clear whether such persons had pent-up needs when they chose to enroll in an HMO. A report describing the findings of this study is being prepared.

Mortality Levels Among Aged Medicare Beneficiaries Enrolled in Health Maintenance Organizations

Funding:	Intramural
Project Director:	Gerald F. Riley Division of Beneficiary Studies

Description: This study is part of the Office of Research and Demonstrations' evaluation of the Tax Equity and Fiscal Responsibility Act Health Maintenance Organization and Competitive Medical Plan program. It involves an analysis of mortality patterns among aged Medicare risk Health Maintenance Organization (HMO) and competitive medical plan enrollees, as a measure of health status differences between HMO and fee-for-service (FFS) beneficiaries. The focus of this study is a cross-sectional analysis of HMO mortality patterns in 1987. Mortality in each of 108 plans was compared with the mortality experience of local Medicare FFS beneficiaries, controlling for demographic characteristics included in the adjusted average per capita cost (AAPCC).

Status: A paper entitled "Enrollee Health Status under Medicare Risk Contracts: An Analysis of Mortality Rates" has been accepted for publication by *Health Services Research*. Findings indicate that enrollee mortality rates were about 80 percent of mortality levels among beneficiaries in the FFS sector in 1987, after adjusting for the demographic factors used in the AAPCC. Mortality rates were lowest among enrollees in staff model HMOs. Mortality was also lower among more recent HMO enrollees in 1987 than among

beneficiaries who had been enrolled in an HMO for several years.

Other Studies

Developing the Design for a Demonstration of Medicare Payment for Community Nursing Organizations

Project No.: 99-C-99168/3
Period: August 1988-July 1991
Funding: $ 326,409
Award: Cooperative Agreement
Awardee: Project HOPE Research Center
(See page 74)
Project Officer: Margaret A. Coopey
Division of Long-Term Care Experimentation
Mandate: Omnibus Budget Reconciliation Act of 1987
(Public Law 100-203)

Description: The purpose of this project is to assist the Health Care Financing Administration in designing a demonstration project (consisting of at least four sites) to provide payment to community nursing organizations (CNOs) for home health services, durable medical equipment, and certain ambulatory care furnished to Medicare beneficiaries on a prepaid, capitated basis. Public Law 100-203 specifies that two different capitated payment methods will be implemented in the demonstration. Before the demonstration can begin, however, detailed planning and implementation of the general requirements of the congressional mandate have to be undertaken. These include:

- Establishing organizational requirements and standards for CNOs.
- Developing a detailed methodology for computing payment rates.
- Preparing an implementation plan for the demonstration which includes developing site selection criteria, soliciting applications for participation from eligible organizations, determining quality assurance mechanisms and marketing strategies appropriate for these sites, assisting in evaluating proposals, selecting demonstration sites, and developing an evaluation strategy.

Status: Development activities are under way. Implementation of the demonstration will begin in 1991 after these activities are completed.

Alternatives to Fee For Service as a Base for Health Maintenance Organization Premium Setting

Project No.: 99-C-99169/5
Period: August 1989-July 1990
Funding: $ 54,939
Award: Cooperative Agreement
Awardee: University of Minnesota Research Center
(See page 75)
Project Officer: James C. Beebe
Division of Beneficiary Studies

Description: Currently, health maintenance organizations (HMOs) that enroll Medicare beneficiaries under the Tax Equity and Fiscal Responsibility Act risk contracts are reimbursed 95 percent of the eligible costs the enrollees would have incurred if they had remained in the fee-for-service (FFS) sector. This approach of linking HMO payments to FFS costs has been criticized on both conceptual and technical grounds. The purpose of this project is to develop, analyze, and report on alternative methods of reimbursing HMOs for the care of Medicare beneficiaries.

Status: The final report is expected to be available from the National Technical Information Service in Spring 1991.

Evaluation of the Prepaid Managed Health Care Demonstration

Project No.: 99-C-98489/9
Period: September 1985-June 1991
Funding: $ 2,289,003
Award: Cooperative Agreement
Awardee: The RAND Policy Research Center
(See page 72)
Project Officer: Arne H. Anderson
Division of Health Systems and Special Studies

Description: The RAND Policy Research Center is conducting an independent evaluation of the cost effectiveness of the prepaid managed health care demonstration. This demonstration project is being sponsored by the Robert Wood Johnson Foundation, the National Governors' Association, and the Health Care Financing Administration. The demonstration is designed to enable health care providers to develop more efficient arrangements for the financing and delivery of health services. Most projects will be limited to Medicaid and will utilize prospective payment and case management.

Status: RAND is focusing its evaluation on 2 sites—Lutheran Medical Center, Brooklyn, New York; and Jackson Memorial Hospital, Miami, Florida. The key element of RAND's research design is the random assignment of Medicaid clients to either the health maintenance organization demonstration or the fee-for-service setting. Approximately 680 Aid to Families with Dependent Children families per site were to participate in the random assignment process. All clients have been enrolled in the study and their health care expenditures are being monitored. A final cost-effectiveness report is expected in Summer 1991.

Social Health Maintenance Organization Project for Long-Term Care

Period: August 1984-September 1992
Award: Grants

Project Officers: Phyllis A. Nagy and Robin J. Brocato
Division of Long-Term Care Experimentation
Division of Health Systems and Special Studies

Mandates: Deficit Reduction Act of 1984 (Public Law 98-369)
Omnibus Budget Reconciliation Act of 1987 (Public Law 100-203)

Description: In accordance with Section 2355 of Public Law 98-369, this project was developed and is currently implementing the concept of a social health maintenance organization (S/HMO) for acute and long-term care. A S/HMO integrates health and social services under the direct financial management of the provider of services. All services are provided by or through the S/HMO at a fixed annual prepaid capitation sum. Four HMOs will be selected to participate in this project.

Status: Of the four S/HMO demonstration sites selected, two HMOs have added long-term care services to their service packages and two long-term care providers have added acute care services to their service packages. The sites have developed a common service package, financing plans, and risk-sharing arrangements. All four demonstration sites utilize Medicare and Medicaid waivers, and all initiated service delivery by March 1985. During the first 30 months of operations, the Federal and State governments shared financial risk with the sites. This risk sharing ended August 31, 1987. The S/HMO sites are:

Elderplan, Inc.
Project No.: 95-P-09101/2
Grantee: Elderplan, Inc.
1276 50th Street
Brooklyn, N.Y. 11219
Project Officer: Phyllis A. Nagy

Senior Plus
Project No.: 95-P-09102/5
Grantee: Group Health, Inc., and Ebenezer Society
2829 University Avenue, SE.
Minneapolis, Minn. 55414
Project Officer: Robin J. Brocato

Medicare Plus II
Project No.: 95-P-09103/0
Grantee: Kaiser-Permanente Center for Health Research
4610 Southeast Belmont Street
Portland, Ore. 97215-1795
Project Officer: Robin J. Brocato

SCAN Health Plan
Project No.: 95-P-09104/9
Grantee: Senior Care Action Network
521 East Fourth Street
Long Beach, Calif. 90802
Project Officer: Phyllis A. Nagy

Evaluation of Social Health Maintenance Organization Demonstrations

Project No.: 500-85-0042
Period: September 1985-November 1990
Funding: $ 3,547,934
Award: Contract
Contractor: University of California, San Francisco
Center for Health and Aging
San Francisco, Calif. 94143
Project Officer: Nancy A. Miller
Division of Long-Term Care Experimentation

Mandates: Deficit Reduction Act of 1984 (Public Law 98-369)
Omnibus Budget Reconciliation Act of 1987 (Public Law 100-203)

Description: The social health maintenance organization (S/HMO) seeks to enroll, voluntarily, persons 65 years of age or over in an innovative prepaid program that integrates medical, social, and long-term care delivery systems. The S/HMO merges the health maintenance organization concepts of capitation financing and provider risk sharing developed by the Health Care Financing Administration (HCFA) under its Medicare capitation and competition demonstrations with the case management and support services concepts underlying the Department of Health and Human Services (DHHS)-sponsored long-term care demonstrations serving the chronically ill aged. Preliminary evaluation results were submitted to Congress (as mandated by Public Law 98-369) and will be used by HCFA and DHHS to assess whether the S/HMO concept should be fostered through changes in prepaid Medicare contracting regulations.

Status: This contract was awarded in September 1985. An interim report was forwarded to Congress in August 1988. A copy of the report, "Evaluation of the Social/Health Maintenance Organization Demonstration," may be obtained from the National Technical Information Service (NTIS), accession number PB89-215446. The evaluation and data collection plan for the demonstration is available from NTIS as a technical appendix and may be obtained by using accession number PB89-191779. The data collection phase has been completed. Data analysis will be completed in early 1991, and the final report will be written by August 1991.

Primary Care Case Management Evidence from Medicaid: Synthesizing Program Effects by Program Design

Project No.: 18-C-99641/3
Period: July 1990-June 1991
Funding: $ 80,233
Award: Cooperative Agreement

Awardee: Virginia Commonwealth University
Medical College of Virginia
Box 206
Richmond, Va. 23298-0568
Project Officer: Ruth B. Pickard
Division of Health Systems and Special Studies

Description: Medical College of Virginia proposes to synthesize the results from various Medicaid primary care case management programs. Given the number of States that have implemented alternative forms of primary care case management systems under Medicaid, this project is expected to provide a typology for examining potential policy changes to facilitate managed care. Cross-program comparisons will be made using a classification system including the following parameters—voluntary versus mandatory enrollment, organizational approach, extent of case manager participation, service range, and payment method. A data base will be constructed from the previous studies with which policymakers and program managers can make informed decisions regarding future support for and design of primary care case management programs.

Status: This project is in the early developmental stage.

Minnesota Prepaid Medicaid Demonstration

Project No.: 11-C-98223/5
Period: June 1982-June 1995
Funding: $ 349,421
Award: Cooperative Agreement
Awardee: Minnesota Department of Public Welfare
2nd Floor—Space Center
444 Lafayette Road
St. Paul, Minn. 55101
Project Officer: Ronald W. Deacon
Division of Health Systems and Special Studies

Description: The Minnesota Department of Public Welfare was awarded a cooperative agreement to develop a prepaid capitation demonstration project for the eligible Medicaid population in 3 counties—1 urban, Hennepin; 1 suburban, Dakota; and 1 rural, Itasca. For all counties, the per capita payment will be calculated based on the average fee-for-service (FFS) cost per eligible person in the program in each county. This rate will be paid to competing health plans that organize to provide services to Medicaid recipients within the urban and suburban counties. A rate-cell approach is being used to pay capitation rates. The cells incorporate adjustments for age, sex, category of eligibility, county of residence, and institutional and Medicare status. The capitation rate for Aid to Families with Dependent Children recipients will be 90 percent of the FFS costs. For Supplemental Security Income recipients, the rate will be 95 percent of the FFS costs. The counties have chosen to bear both the risk and responsibility of providing these services. The rural county, Itasca, will not have competing plans. The capitation will go to Itasca County, which has contracted with Health Maintenance Organization of Minnesota for claims processing and management services. Health Maintenance Organization of Minnesota will coordinate the case management and utilization controls and will supervise local providers in delivering services to the Medicaid population.

Status: The State submitted an operational protocol that was approved by the Health Care Financing Administration in September 1985. The implementation phase began in Itasca County in September 1985 and in Hennepin and Dakota Counties in December 1985. There are presently 5 participating competing plans in Hennepin and Dakota Counties. Initial enrollment was slower than anticipated because recipients failed to make choices (30-percent assignment rate); however, enrollment is now at 25,000. During the next year, enrollment will be extended to the entire eligible population of Hennepin County. This project was included in an earlier evaluation conducted by Research Triangle Institute. The demonstration was scheduled to end in December 1988, but Congress has extended it until June 1995.

Municipal Health Services Program

Period: August 1979-December 1993
Participants: Baltimore, Md.
Cincinnati, Ohio
Milwaukee, Wis.
San Jose, Calif.
Project Officer: Robin J. Brocato
Division of Health Systems and Special Studies

Description: Development of the Municipal Health Services Program (MHSP) was a collaborative effort of 4 major cities in 4 States, the U.S. Conference of Mayors, the American Medical Association, the Robert Wood Johnson Foundation (RWJF), and the Health Care Financing Administration (HCFA). It was initiated by RWJF through grants of $3 million awarded in June 1978 to each of the following 4 cities: Baltimore, Cincinnati, Milwaukee, and San Jose. HCFA joined the project by providing Medicare and Medicaid waivers to test the effects of increased utilization of municipal health centers by:

- Eliminating coinsurance and deductibles.
- Expanding the range of covered services.
- Paying the cities the full cost of delivering services at the clinics.

The intent of the waivers is to shift fragmented utilization from costly hospital emergency rooms and outpatient departments toward lower cost MHSP clinics that would provide beneficiaries with comprehensive primary and preventive health care.

Status: HCFA contracted with the University of Chicago's Center for Health Administration Studies (CHAS) to perform a detailed evaluation of cost and utilization. CHAS determined in its final evaluation report that the MHSP improved access to health

services. The analysis also indicated that MHSP clients in the Medicare program had significantly lower inpatient and total health care expenditures than a comparison group, after adjusting for predisposing, enabling, and need variables. Since 1986, the MHSP has experienced a significant increase in costs and utilization. The 1989 fiscal year (FY) costs were $32 million as compared with $14 million in FY 1985. Approximately 29,000 individuals were served in 1987. In FY 1989, 37,023 patients received MHSP services. MHSP waivers were scheduled to terminate on December 31, 1984; however, HCFA agreed to extend the Medicare waivers 1 additional year, through December 1985. With the passage of the Omnibus Budget Reconciliation Act of 1989 (OBRA 1989), the demonstrations were extended to December 31, 1993. In addition, OBRA 1989 mandated that an independent evaluation regarding program cost effectiveness, beneficiary costs, quality of care, and other relevant factors be undertaken and that the findings of the evaluation be submitted in a Report to Congress.

Evaluation of the Municipal Health Services Program

Project No.: 500-87-0028
Period: September 1990-December 1992
Funding: $ 555,928
Award: Technical Support: Evaluation of Demonstrations (See page 76)
Contractor: Mathematica Policy Research, Inc.
P.O. Box 2393
Princeton, N.J. 08542-2393
Project Officer: Robin J. Brocato
Division of Health Systems and Special Studies
Mandate: Omnibus Budget Reconciliation Act of 1989
(Public Law 101-239)

Description: This project will evaluate the four Municipal Health Services Program (MHSP) demonstrations to determine cost effectiveness, beneficiary costs, and the quality of health services delivered in the MHSP clinics. It will be undertaken in two phases. In Phase I, an intensive case study will be completed which will describe the organization and delivery of MHSP services and assess program operations to determine if the original goals and objectives of the demonstration continue to be met. The results of this phase will primarily describe the current process used by MHSP sites to serve the medical needs of its users. In Phase II of the evaluation, Medicare costs, quality of care, and the cost effectiveness of the demonstration will be determined. The cost and utilization experience for MHSP users will be compared with those of a control group for the years 1987, 1988, and 1989. The results of the evaluation will be presented in a Report to Congress in 1993.

Status: The project is in the early stages of Phase I.

Florida Alternative Health Plan Project

Project No.: 11-C-98231/4
Period: June 1982-December 1989
Funding: $ 729,114
Award: Cooperative Agreement
Awardee: State of Florida
1317 Winewood Boulevard
Tallahassee, Fla. 32301
Project Officer: Ronald W. Deacon
Division of Health Systems and Special Studies

Description: The State of Florida developed and implemented an alternative health plan demonstration to provide a continuum of health care and social support services to frail elderly Medicaid recipients. Mt. Sinai Medical Center in Miami provides comprehensive health services to enrolled Medicaid recipients. In cooperation with several community affiliations, it provides outreach services that include transportation, personal emergency response, in-home and community social and medical care, home assessment, and health education and prevention training to the community. Eligible clients are those Medicaid recipients who are at risk of nursing home placement and who could live in the community if a full range of coordinated services were made available to them. Mt. Sinai is paid a capitation rate set at 98 percent of an equivalent fee-for-service amount and is at risk for the cost of all services.

Status: Enrollment in the plan began in September 1987 and reached 200 by the end of the demonstration. The State and Mt. Sinai submitted utilization and cost reports indicating that the alternative health plan was financially viable. The State began a phasedown 3 months before the demonstration's scheduled termination date. The plan will continue under the regular Medicaid program; however, the benefit package offered by Mt. Sinai will not include home and community-based services. An evaluation of the demonstration was conducted by Mathematica Policy Research and is available from the National Technical Information Service, accession number PB90-256397.

Evaluation of the Florida Alternative Health Plan Project

Project No.: 500-87-0028
Period: September 1988-May 1990
Funding: $ 122,262
Award: Technical Support: Evaluation of Demonstrations (See page 76)
Contractor: Mathematica Policy Research, Inc.
P.O. Box 2393
Princeton, N.J. 08543-2393
Project Officer: Ruth B. Pickard
Division of Health Systems and Special Studies

Description: This project evaluated the demonstration of a capitated model for the delivery of health care and social support services to those frail elderly among the Medicaid population who would otherwise be at risk of premature institutionalization. The study assessed the feasibility of using case management techniques to coordinate a variety of services under a single provider that would also assume full financial risk for the cost of such care. In particular, the evaluation sought to determine the adequacy of the ratesetting methodology, the cost effectiveness of the case management program, and the degree of satisfaction with these arrangements among the providers, as well as among both the frail elderly clients and their informal caregiver agents. ElderCare clients were found to have received a higher volume of home and community-based services and were, thus, more costly. Although the plan's capitation payments covered its budget line item costs, the report concludes that a substantial subsidy from the host hospital may have masked "true" operating costs. Although enrollments fell short of original goals, staff, clients, and informal caregivers indicated a high level of satisfaction with access and quality of care received. Evidence suggests that caregiver commitment was such that few enrollees would have been institutionalized in the absence of the plan.

Status: The final report entitled "Final Report for the Florida Alternative Health Plan Project," accession number PB90-256397, is available from the National Technical Information Service.

Evaluation of Medicare Health Maintenance Organization Demonstration Projects

Funding: Intramural
Project Director: Gerald F. Riley
Division of Beneficiary Studies

Description: This study evaluates demonstration projects undertaken to encourage health maintenance organizations (HMOs) to participate in the Medicare program under a risk mechanism. Three demonstration HMOs are included in the study—Fallon Community Health Plan, Greater Marshfield Community Health Plan, and Kaiser-Permanente of Portland, Oregon. The study includes 18,085 aged Medicare beneficiaries who had enrolled in the plans as of April 1981. Also included are comparison groups from a random sample of aged Medicare beneficiaries living in the same geographic areas as the enrollees. The evaluation examines issues such as biased selection, patterns of prior and post-enrollment use by HMO enrollees, and comparisons of use and expenditure patterns by HMO and non-HMO beneficiaries.

Status: The following published works include findings from this study:

- Kasper, J.D., Riley, G.F., McCombs, J.S., and Stevenson, M.A.: Beneficiary selection, use, and charges in two Medicare capitation demonstrations. *Health Care Financing Review*, Vol. 10, No. 1. HCFA Pub. No. 03274. Office of Research and Demonstrations, Health Care Financing Administration. Washington. U.S. Government Printing Office, Fall 1988.
- Kasper, J.D., Riley, G.F., and McCombs, J.S.: Capitation and Medicare: Past, present and future. In Pauly, M.V., and Kissick, W.L., eds. *Lessons from the First 20 Years of Medicare*. Pennsylvania. University of Pennsylvania Press, 1988.
- McCombs, J.S., Kasper, J.D., and Riley, G.F.: Do HMOs reduce health care cost? A multivariate analysis of two Medicare HMO demonstration projects. *Health Services Research* 25(4), October 1990.
- Riley, G., Rabey, E., and Kasper, J.: Biased selection and regression toward the mean in three Medicare HMO demonstrations: A survival analysis of enrollees and disenrollees. *Medical Care* 27(4):337-347, April 1989.

Beneficiary Incentives to Choose Alternative Health Plans

Project No.: 99-C-98489/9
Period: May 1986-December 1990
Funding: $ 422,309
Award: Cooperative Agreement
Awardee: The RAND Policy Research Center
(See page 72)
Project Officer: Armen H. Thoumaian
Division of Hospital Experimentation

Description: The objective of this project is to estimate how various design features of alternative payment systems for Medicare affect beneficiaries' decisions to remain in the traditional program or to join an alternative health system. Using a mail survey, RAND is studying the preferences of beneficiaries for various hypothetical health plans to create an economic model of beneficiary choice.

Status: The study's design, "Beneficiary Incentives to Participate in Alternative Health Plans: A Research Design," was completed in March 1988 and is available from RAND (N-2733-HCFA). Field work on the survey, which began in June 1988, was completed in December 1988. A total of 1,047 interviews were completed, representing 43 percent of the eligible sample. Data from the survey were linked with Medicare files to create the analytic data file necessary for the creation of an economic model of beneficiary preference. A general economic model was completed in March 1990, and the final report is expected by December 1990.

Hospital Payment

Prospective Payment System Refinements

A Diagnosis-Related-Group-Based Case-Mix Analysis of Oncology Care in Comprehensive Cancer Centers

Project No.: 15-C-98922/1
Period: August 1986-May 1989

Funding: $ 461,000
Award: Cooperative Agreement
Awardee: Brandeis University
415 South Street
Waltham, Mass. 02254
Project Officer: John T. Petrie
Division of Reimbursement and Economic Studies
Mandate: Social Security Amendments of 1983 (Public Law 98-21)

Description: The short-term goal of this project was to improve the capacity of the current diagnosis-related group (DRG) system to account for variability within DRGs that contain cancer diagnoses. The long-term goal was to develop a classification methodology that can discriminate among admissions with different resource requirements for 3 types of cancer—colon, breast, and lung. There were 2 components to this project:

- A secondary data analysis of the Medicare provider analysis and review (MEDPAR) files from 1984, 1985, and 1986 for 3 types of cancer. The purpose of this exercise is to suggest a typology for Medicare cancer discharges.
- A retrospective record review in 5 Boston-area hospitals (2 major teaching hospitals, 1 nonteaching hospital, and 2 community hospitals).

All analyses focused on the Medicare population and included data on several years of utilization and resource use experience in comparing patient characteristics with treatment settings.

Status: The researchers constructed a linked 1984, 1985, and 1986 MEDPAR data file for beneficiaries who had an inpatient discharge with a principal diagnosis of cancer. The analysis focused on determining the volume and costs associated with cancer-related discharges. Researchers studied the utility of grouping discharges by primary anatomical site of cancer and the usefulness of modifying the leading cancer DRGs using primary site and other variables. They also examined the case mix and the charges for chemotherapy treatment for inpatient discharges for DRG number 410 (admission for chemotherapy) from 8 teaching hospitals and those charges for outpatient visits from 2 teaching hospitals. Findings were published in an article by Lion et al. entitled "Case mix and charges for inpatient and outpatient chemotherapy" in the *Health Care Financing Review*, Vol. 8, No. 4, Summer 1987. The researchers developed and tested a survey instrument to undertake retrospective medical record review in 5 Boston-area hospitals. They also abstracted information for about 800 records at these hospitals to gather data on inpatient stays, followup admissions, and related outpatient care. Among the findings are:

- Little difference existed in the amount of variation in total charges explained by 6 admission purpose groups versus the cancer DRGs.
- Advances in technology, such as new infusion techniques that are slower in nature, may require longer lengths of stay.
- Small rural hospitals and public hospitals appear to show a high level of palliative-type regimens in treating cancer patients. This indicates that in these hospitals palliative care may be substituting for skilled nursing facility care, home health care, or hospice care.
- The medical record review portion of the study yielded data on about 800 cases. Cell sizes for the 3 cancers and the 6 admission purpose groups were small. This medical record review served to confirm the hypothesis that certain hospitals specialize in treating certain types of cancer patients.

The final report entitled "Predicting Costs of Hospitalization for Cancer Care" is available from the National Technical Information Service, accession number PB90-205295.

Methods to Improve Case-Mix and Severity of Illness Classification for Use in the Medicare Prospective Payment System

Project No.: 17-C-98840/1
Period: September 1985-December 1989
Funding: $ 1,400,564
Award: Cooperative Agreement
Awardee: The Health Data Institute
Seven Wells Avenue
Newton, Mass. 02159
Project Officer: Timothy F. Greene
Division of Reimbursement and Economic Studies
Mandate: Social Security Amendments of 1983 (Public Law 98-21)

Description: This study, which contributed to the Health Care Financing Administration's (HCFA's) congressionally mandated research on diagnosis-related group (DRG) refinement, was intended to support investigation of alternative HCFA policies, assess multivariate severity models, and examine use of additional clinical and service items as severity adjusters. Project researchers developed data bases of Colorado Medicare Part A and Part B data. They identified clinical indicators of resource use and collected data from medical records in Boston-area hospitals. They used national data, collected principally by the Office of Inspector General, Department of Health and Human Services, to validate the results obtained from analyses of the Boston data. Researchers also conducted analyses of the reliability of medical record review and analyses of cost and clinical data developed in HCFA's mortality predictors project.

Status: The study concentrated its efforts on evaluating the potential use of clinical data in medical records to explain resource use within and across DRGs. Specifically, measures based on clinical data explained from 15 to 63 percent of variation in resource use within any given condition (a group of DRGs) and from 15 to 53 percent of variation across multiple conditions in models using Boston-area data. When applied to national data, these measures explained up to 25 percent

of variation across DRGs. In general, models using extreme values of variables measured during a hospital stay explained more variation in resource use than models that use values at admission. The study showed that use of extreme rather than admission values in a payment system has the potential of allocating more resources to patients receiving ineffective care. Furthermore, most of the models developed included from three to five clinical variables, although variables with the strongest explanatory power differed across conditions. The project provided technical support for the intramural mortality predictors project. Models were developed by the Office of Research and Demonstrations to predict the probability of death of Medicare acute care hospital patients with stroke, pneumonia, myocardial infarction, and congestive heart failure. The resulting models were incorporated in microcomputer software prepared by the grantee. The "Medicare Mortality Predictor System" software can be obtained from the National Technical Information Service (NTIS), accession number PB88-240171. Documentation relating to this study is found in the "Medicare Mortality Predictor System: User's Guide" and can be obtained from NTIS, accession number PB88-252283.

Measuring Components of Case-Mix Change

Project No.: 99-C-98489/9
Period: August 1989-March 1990
Funding: $ 189,666 (Prospective Payment Assessment Commission's share of funding is $ 76,000)
Award: Cooperative Agreement
Awardee: The RAND Policy Research Center
(See page 72)
Project Officer: John T. Petrie
Division of Reimbursement and Economic Studies
Mandate: Social Security Amendments of 1983 (Public Law 98-21)

Description: The case-mix index (CMI) measures the relative costliness of a group of Medicare patients. Theoretically, increases in the CMI can be separated into real increases or coding changes. Real increases are caused by increases in the severity of illness in the patient population or by changes in the treatment patients receive. This study separately measured changes in the CMI from 1987 to 1988 that resulted from real and coding changes. As a subcontractor to the project, SysteMetrics/McGraw-Hill abstracted a sample of Medicare hospital discharges for this analysis.

Status: This study is similar to the RAND study, "Analysis of Case-Mix Growth Among Hospitals," conducted in 1988-89, which covered the increase in the CMI from 1986 to 1987. RAND is currently working on a report entitled "Has Creep Crept Up? Adjusting the Rate Medicare Pays Hospitals."

Do Low-Income Patients Have Costlier Hospital Stays?

Project No.: 99-C-98489/9
Period: August 1990-July 1991
Funding: $ 72,768
Award: Cooperative Agreement
Awardee: The RAND Policy Research Center
(See page 72)
Project Officer: Brigid Goody
Division of Reimbursement and Economic Studies
Mandate: Social Security Amendments of 1983 (Public Law 98-21)

Description: The purpose of this study is to provide new information about the effect of low-income patients on hospital resource use. Using 1988 Medicare provider analysis and review claims, RAND will test the null hypothesis that low-income patients do not have costlier stays than their non-low-income counterparts, controlling for diagnosis-related group and the hospital where they are treated. If any higher cost is found for low-income patients, either in all or in a subset of hospitals, the study will suggest the magnitude of the prospective payment system adjustment that would be supported by this severity argument alone.

Status: This project is in the early developmental stage.

Development of Patient Origin and Transfer Data

Project No.: 99-C-99168/3
Period: August 1990-May 1991
Funding: $ 10,006
Award: Cooperative Agreement
Awardee: Project HOPE Research Center
(See page 74)
Project Officer: William Buczko
Division of Reimbursement and Economic Studies
Mandate: Social Security Amendments of 1983 (Public Law 98-21)

Description: In the 1988 and 1989 budget years, patient origin and transfer files were designed and developed using Medicare provider analysis and review (MEDPAR) data for fiscal years (FYs) 1984-88 to examine activity in Medicare hospitals. This task extends that work to construct similar files for FY 1989. These files will support longitudinal analyses of rural and urban inner city health care issues. Studies will include changes in patterns of hospital referrals and patient transfers, the impact on access where rural and urban inner city hospitals have closed, and changes in the structure of the hospital industry in specific market areas.

Status: Data base construction for the FY 1989 files will begin when a complete FY 1989 MEDPAR file becomes available in January 1991.

Graduate Medical Education Payment

Project No.: 99-C-98526/1
Period: August 1990-December 1990
Funding: $ 49,000
Award: Cooperative Agreement
Awardee: Brandeis University Research Center
(See page 73)
Project Officer: John T. Petrie
Division of Reimbursement and Economic Studies
Mandate: Social Security Amendments of 1983 (Public Law 98-21)

Description: As a first step in this project, Brandeis will assemble information that enumerates the strengths and weaknesses of the previous system of paying for the costs of graduate medical education (GME) and the recently implemented mechanism. This step entails an understanding of whether the level of funding is appropriate (excessive or insufficient) and whether it is allocated and targeted optimally. Second, it will be necessary to evaluate current approaches aimed at achieving the indirect goals of the payment program. This step entails a critical look at such problems as physician location maldistribution, overemphasis on specialty and in-hospital care, underemphasis on preventive and geriatric care, and failure to attract sufficient numbers of minorities and individuals from other disadvantaged backgrounds into the medical profession. Third, it will review the current GME system in order to suggest alternative payment mechanisms.

Status: This project is in the early developmental stage.

Examination of Alternative Approaches for Graduate Medical Education Payment Through Medicare

Project No.: 99-C-99168/3
Period: August 1990-December 1990
Funding: $ 34,928
Award: Cooperative Agreement
Awardee: Project HOPE Research Center
(See page 74)
Project Officer: John T. Petrie
Division of Reimbursement and Economic Studies
Mandate: Social Security Amendments of 1983 (Public Law 98-21)

Description: The objectives of this task are to analyze Medicare's methodology of payment for direct and indirect graduate medical education (GME) costs and to recommend alternative payment options. Alternatives could include incentives to encourage training in primary, preventive, geriatric, and ambulatory care; establishment of practices in rural and medically underserved areas; and recruitment of residents from minority and disadvantaged backgrounds. The project is to provide a brief, comprehensive review of the literature regarding GME payment, and a description and analysis of the feasibility of deriving and implementing the alternative approaches recommended.

Status: This project is in the early developmental stage.

Simulations of Alternative Prospective Payment System Outlier Payment Options

Project No.: 99-C-98489/9
Period: August 1988-July 1990
Funding: $ 55,310
Award: Cooperative Agreement
Awardee: The RAND Policy Research Center
(See page 72)
Project Officer: Philip G. Cotterill
Division of Reimbursement and Economic Studies
Mandate: Social Security Amendments of 1983 (Public Law 98-21)

Description: This study is a continuation of a previous project, Development of Alternative Prospective Payment System Outlier Payment Options. RAND is analyzing the effect of simulating outlier payments using unaudited recent cost reports versus audited cost reports for earlier years. RAND will evaluate the measure used in earlier work to assess the financial risk to groups of hospitals and the financial risk that patient groups pose to hospitals. RAND will also update the data base used in the previous outlier project.

Status: The final draft, "The Effect of Random Factors on Hospital Profits Under Medicare's Prospective Payment System" (WD-5037-HCFA), is available from RAND. The study found that the majority of financial risk under the prospective payment system is caused by random variation in case mix. However, other factors such as management actions and economic changes add some additional financial risk. Evidently, most hospitals do not manage case mix to reduce swings in profits. The study concluded that under current policy outlier payments reduce financial risk between 6.9 and 10.3 percent.

Assessment of Recent Changes in Prospective Payment System Outlier Policy

Project No.: 99-C-98489/9
Period: August 1990-July 1991
Funding: $ 80,473
Award: Cooperative Agreement
Awardee: The RAND Policy Research Center
(See page 72)
Project Officer: Sheila O'Dougherty
Division of Reimbursement and Economic Studies
Mandate: Social Security Amendments of 1983 (Public Law 98-21)

Description: Under this project, RAND will compare the outcomes of the fiscal year (FY) 1989 outlier policy with the outcomes of the FY 1988 outlier policy with respect to the financial protection they afford hospitals

and the distribution of outlier payments among high-cost cases, patient groups, and hospital groups. RAND will also estimate changes in hospital behavior in response to the FY 1989 outlier policy change. Finally, it will estimate the effect of various additional changes in outlier policy, making recommendations as necessary.

Status: This project is in the early developmental stage.

Uncompensated Care Tables: 1984 American Hospital Association and Urban Institute Survey

Project No.: 99-C-98526/1
Period: August 1988-July 1990
Funding: $ 32,126
Award: Cooperative Agreement
Awardee: Brandeis University Research Center
(See page 73)
Project Officer: John T. Petrie
Division of Reimbursement and Economic Studies
Mandate: Social Security Amendments of 1983 (Public Law 98-21)

Description: This project involved analyses of data on the distribution of the uncompensated care burden. The analyses included data obtained from a special 1984 American Hospital Association (AHA) and Urban Institute survey on health care for the poor and underinsured, as well as data from the Current Population Survey and other data sources. Information gathered from these analyses was used to produce uncompensated care data tables.

Status: The data tables were delivered to the Health Care Financing Administration in November 1988. During 1989 and 1990, this work was updated and expanded using 1987 financial data from the AHA. The result is a descriptive paper on uncompensated care costs for 1987 entitled "Hospital Provision of Uncompensated Care: A Data Update." The paper will soon be available from the National Technical Information Service.

Impact of the Growth in Ambulatory Procedures and Diagnostic Services on Inpatient Care

Project No.: 99-C-99168/3
Period: August 1990-July 1991
Funding: $ 39,892
Award: Cooperative Agreement
Awardee: Project HOPE Research Center
(See page 74)
Project Officer: Philip G. Cotterill
Division of Reimbursement and Economic Studies
Mandate: Social Security Amendments of 1983 (Public Law 98-21)

Description: The overall goal of this project is to increase our understanding of the links between provision of ambulatory services, especially diagnostic procedures, and utilization of hospital inpatient services. This objective will be accomplished by studying the incentives faced by each of the major participants in the health services market—patients, hospitals, physicians, and independent providers of diagnostic services—and the effects of such incentives on decisions about capacity to provide ambulatory services. Project HOPE will provide an empirical analysis of linkages between ambulatory and inpatient services. Among the ultimate uses of these results will be suggestions about the combined effects of Medicare payment for ambulatory diagnostic services and inpatient care.

Status: This project is in the early developmental stage. The initial work of reviewing the payment policies of public and private third-party payers for inpatient and ambulatory services has been completed.

Hospital Transfer and Referral Patterns

Project No.: 99-C-99168/3
Period: May 1988-March 1990
Funding: $ 113,386
Award: Cooperative Agreement
Awardee: Project HOPE Research Center
(See page 74)
Project Officer: William Buczko
Division of Reimbursement and Economic Studies
Mandate: Social Security Amendments of 1983 (Public Law 98-21)

Description: The objective of this task was to design and develop a longitudinal data base containing information on transfer and referral activities in Medicare hospitals. The data base included data for a 5-year period and was created from the Health Care Financing Administration's (HCFA's) master provider of services file and the Medicare provider analysis and review file.

Status: This project is completed. Transfer and referral data sets for fiscal years 1984-88 and final documentation for these files were received in HCFA's Office of Research and Demonstrations in March 1990. These data sets and their documentation complete the longitudinal transfer and referral data base. All project deliverables have been received.

Interactions Between Outlier Payment Policy and Methods of Diagnosis-Related Groups Recalibration and Classification

Project No.: 99-C-98489/9
Period: August 1989-July 1990
Funding: $ 95,556
Award: Cooperative Agreement
Awardee: The RAND Policy Research Center
(See page 72)
Project Officer: Philip G. Cotterill
Division of Reimbursement and Economic Studies
Mandate: Social Security Amendments of 1983 (Public Law 98-21)

Description: The project comprised three tasks. The first was an assessment of the extent to which the charge-based and cost-based relative weights for diagnosis-related groups (DRGs) have diverged between 1984 and 1987. The second task was a comparison of payments to, and risk faced by, groups of hospitals under several budget-neutral methods of financing outlier payments. The third was an investigation of how the revised Yale DRGs would affect the need for outlier payments and appropriate parameters for outlier policy.

Status: This project is completed. The final draft, "A Longitudinal Comparison of Charge-Based Weights with Cost-Based Weights" (WD-4864-HCFA), is available from RAND. Researchers found that differences between charge-based and cost-based weights are similar in magnitude to the amount of temporal change in the DRG weights. Hence, the fact that charge-based weights can be computed using more timely data than cost-based weights is an important consideration that favors the use of charge-based weights.

Prospective Payment System Impact

Impact of Medicare's Prospective Payment System and Private Sector Initiatives: The Blue Cross and Blue Shield Organization's Experiences

Project No.: 17-C-98757/5
Period: September 1985-February 1989
Funding: $ 319,335
Award: Cooperative Agreement
Awardee: Blue Cross and Blue Shield Association
676 North St. Clair
Chicago, Ill. 60611
Project Officer: Timothy F. Greene
Division of Reimbursement and Economic Studies
Mandate: Social Security Amendments of 1983 (Public Law 98-21)

Description: This study, which contributed to the Health Care Financing Administration's congressionally mandated evaluation of the prospective payment system (PPS), evaluated the impact of PPS and Blue Cross and Blue Shield cost-containment strategies on the payment and utilization experience of the Nation's Blue Cross and Blue Shield plans. Researchers analyzed the interaction between PPS and Blue Cross and Blue Shield cost-containment strategies. They studied the impact of health maintenance organizations (HMOs) and preferred provider organizations (PPOs) on Blue Cross utilization and payments. They also examined the determinants of the formation of alternative delivery systems (i.e., HMOs and PPOs) by Blue Cross plans. Data from individual Blue Cross and Blue Shield plans, supplemented by secondary data from other sources, were used.

Status: Analyses of trends in payments and utilization rates for Blue Cross and Blue Shield plans were used in preparing the 1985 and 1986 Annual Reports to Congress on the *Impact of the Medicare Hospital Prospective Payment System*. Reports on the impact of PPS and cost-containment initiatives and the development of alternative delivery systems on Blue Cross utilization and payments for the period 1980-86 and 1980-87 were submitted. The research findings showed that PPS had a significant indirect effect on Blue Cross hospital utilization and payments for the 1980-87 period, with significant negative impacts on admissions per member and total hospital payments per member and mixed effects on other payment measures. The analysis of alternative delivery systems indicates that the share of Blue Cross and Blue Shield plan membership in HMOs increases and the share in PPOs decreases a year after changes in hospital payment and utilization. Increased HMO enrollment is associated with increased inpatient payments and lower outpatient payment per member. The net result is no effect on total hospital payment per member for the entire plan. In contrast, PPOs increase outpatient payment per member and reduce inpatient payments, with a net effect of a significant reduction in total hospital payment per member for the entire plan. Findings on the 1980-86 experience are shown in the report entitled "The Impact of Medicare's Prospective Payment System and Private Sector Initiatives: Blue Cross Experience, 1980-1986." This report can be obtained from the National Technical Information Service (NTIS), accession number PB88-248604. The second report entitled "The Impact of Medicare's Prospective Payment System and Private Sector Initiatives: Blue Cross and Blue Shield Plan Experience, 1980-1987" contains the analysis of 1987 data and findings from the study of alternative delivery systems. The report is also available from NTIS, using accession number PB91-104760.

Prospective Payment System Studies

Project No.: 500-88-0035
Period: June 1988-December 1990
Funding: $ 1,836,392
Award: Contract
Contractor: Abt Associates, Inc.
55 Wheeler Street
Cambridge, Mass. 02138
Project Officer: Philip G. Cotterill
Division of Reimbursement and Economic Studies
Mandate: Social Security Amendments of 1983 (Public Law 98-21)

Description: This project continues the support for the prospective payment system (PPS) studies provided under the previous contract 500-85-0015 with Abt Associates, Inc., on the impact of the Medicare hospital PPS, other congressionally mandated reports, and other PPS-related studies.

Status: As of September 30, 1990, 15 work assignments had been made under this contract. Three of these assignments have been completed, and work continues on the others. Several working papers are available from Abt Associates. They include "Medicare Use in Rural

Areas," October 1989; "Medicare Episodes Involving Hospitalization and Death," September 1989; "East-West Differences in Episodic Practice Patterns," July 1989; "Hospital Demand for Nurses," December 1989; "Hospital Vulnerability to the PPS," December 1989; "Hospital Labor Markets in the 1980s," December 1989; "Measuring Therapeutic Efficiency of Diagnostic Activity in Medicare: An Exploratory Analysis," April 1990; "The Persistence of Financial Vulnerability in U.S. Hospitals, 1970-87," February 1990; and "A Decomposition of Hospital Cost Inflation by Department," February 1990.

Natural History of Post-Acute Care for Medicare Patients

Project No.: 17-C-98891/5
Period: December 1986-September 1991
Funding: $ 3,702,330
Award: Cooperative Agreement
Awardee: University of Minnesota
School of Public Health
Post-Acute Care Project
704 Washington Avenue, SE., Suite 203
Minneapolis, Minn. 55414
Project Officer: Marni J. Hall
Division of Long-Term Care Experimentation

Description: This is a study of the course and outcomes of post-acute care. It has two major components—an analysis of Medicare data to assess differences in patterns of care across the country and to determine the extent of substitution where various forms of post-acute care services are more or less available; and a detailed examination of clinical cases from the most common diagnostic-related groupings receiving post-acute care in a few selected locations. Measures of the complexity of the clinical cases will be developed using a modification of the medical illness severity grouping system. This project is jointly funded by the Health Care Financing Administration and the Office of the Assistant Secretary for Planning and Evaluation.

Status: This project is in the analysis stage. With the repeal of the Medicare Catastrophic Coverage Act of 1988, this project is no longer congressionally mandated.

Prospective Payment System and Post-Hospital Care: Use, Cost, and Market Changes

Project No.: 18-C-98852/3
Period: September 1985-January 1990
Funding: $ 706,118
Award: Cooperative Agreement
Awardee: Georgetown University
Center for Health Policy Studies
2233 Wisconsin Avenue, NW.
Washington, D.C. 20007
Project Officer: Judith A. Sangl
Division of Long-Term Care Experimentation
Mandate: Social Security Amendments of 1983 (Public Law 98-21)

Description: The purpose of the project is to determine how much the hospital prospective payment system (PPS) shifts care from the hospital to skilled nursing facilities (SNFs) and home health providers and to analyze the impact of this shift on total costs to Medicare and on changes in SNF characteristics that are likely to cause an increase in use by Medicare beneficiaries in the future. Medicare claims will be analyzed to determine how PPS has affected total service use (i.e., hospital, SNF, and home health) and costs for hospital patients. In addition, SNFs will be surveyed to identify changes in nursing home patients, services, and market structure likely to affect Medicare use. The survey will be supplemented with data from the Medicare/Medicaid Automated Certification System (MMACS), SNF cost reports, and other sources.

Status: Major project activities include:

- Completion of nursing home survey.
- Analysis of survey and MMACS data.
- Initiation of claims analysis.
- Completion of 1982 and 1985 Medicare claims processing for pre- and post-PPS analysis.
- Completion of a three-stage sampling process of study hospitals.

The final report is expected by the end of 1990.

Diagnosis-Related Group Outlier Payment Effect on Quality of Care

Project No.: 99-C-98489/9
Period: August 1989-July 1990
Funding: $ 90,125
Award: Cooperative Agreement
Awardee: The RAND Policy Research Center
(See page 72)
Project Officer: Harry L. Savitt
Division of Beneficiary Studies
Mandate: Social Security Amendments of 1983 (Public Law 98-21)

Description: There are concerns that Medicare reimbursement under the diagnosis-related group (DRG) system may induce inappropriate levels of care by paying too much for the outlying patient and too little for the expensive patient who is not an outlier. This research is designed to use the clinical data of 15,000 patients gathered for the DRG/quality of care study being performed by RAND to examine 2 specific questions:

- Do outlier payments have any effect on levels and quality of care?
- What factors are responsible for extremely expensive or long hospital stays?

Status: Analytic files were developed and an analysis was completed. A report was delivered to the Office of Research and Demonstrations in early 1990.

Medicare Hospital Payment Policies: Impact on the Nursing Shortage

Project No.: 99-C-99169/5
Period: August 1989-November 1990
Funding: $ 99,226
Award: Cooperative Agreement
Awardee: University of Minnesota Research Center
(See page 75)
Project Officer: Edgar A. Peden
Division of Reimbursement and Economic Studies
Mandate: Social Security Amendments of 1983 (Public Law 98-21)

Description: Reports of high and increasing vacancy rates for nurses in the Nation's hospitals have, since 1984, raised concern about a nursing shortage. Because this shortage began occurring shortly after the Medicare prospective payment system was implemented, questions have been raised as to whether the change in hospital payment policy may have contributed to this shortage. This study is intended to determine the extent to which Medicare hospital payment policies may be linked to a shortage of nurses. If a link is found, the study will examine policy options to ameliorate the shortage. The analysis will include nurses' labor market behavior, the substitution of registered nurses (RNs) for licensed practical nurses (LPNs), the impact of changing case mix and declining volume on demand for nurses, and the impact of Medicare payment policy.

Status: Preliminary results indicate that the impact of Medicare payment policies on the demand for RNs and LPNs differed quite dramatically in metropolitan and nonmetropolitan hospitals. In urban areas, hospital demand for RNs increased while demand for LPNs decreased. In rural areas, the opposite was the case. The awardee's findings are based on data from 1980 through 1986, although efforts to procure data for 1987 and 1988 continue. The final report is expected by the end of 1990.

Determinants of Hospital Costs and Their Growth

Project No.: 99-C-98489/9
Period: August 1989-October 1990
Funding: $ 82,896
Award: Cooperative Agreement
Awardee: The RAND Policy Research Center
(See page 72)
Project Officer: Edgar A. Peden
Division of Reimbursement and Economic Studies
Mandate: Social Security Amendments of 1983 (Public Law 98-21)

Description: The purpose of this project is to describe and analyze the changes in average cost per Medicare hospital case for 1984 through 1987. The analyses include an assessment of the contribution of changes in technology, case mix, the intensity of inputs used to provide given services, input prices, and profits realized in the first 2 years of the prospective payment system. RAND is conducting its analyses using data from a 20-percent sample of Medicare patient bills and Medicare cost reports for all hospitals during this period. RAND is also analyzing patient discharge data from a sample of California hospitals to study the effect of changes in intensity on average cost per Medicare hospital case.

Status: All data have been received and are currently being analyzed by RAND. RAND has identified candidate diagnosis-related groups (DRGs) that have experienced cost increases caused by technology changes as well as DRGs that have experienced cost increases resulting from a change in the average intensity per case. RAND has completed a regression analysis of hospital cost per case to determine the contribution of technology, intensity, and windfall profits. It has also analyzed data from California hospitals that include standardized units of service for each ancillary cost center. The final report is expected in November 1990.

Monitoring Hospital Costs and Productivity

Project No.: 99-C-98526/1
Period: August 1990-July 1991
Funding: $ 60,000
Award: Cooperative Agreement
Awardee: Brandeis University Research Center
(See page 73)
Project Officer: Edgar A. Peden
Division of Reimbursement and Economic Studies
Mandate: Social Security Amendments of 1983 (Public Law 98-21)

Description: Brandeis University will develop a plan for monitoring and analyzing recent changes in hospital costs, input intensity, hospital wages and employment, and productivity. In designing the plan, the investigators will identify data from the Health Care Financing Administration, other Government agencies, the American Hospital Association, and other private sources that might be used.

Status: This project is in the early developmental stage.

Indirect Medical Education and Small Teaching Hospitals

Project No.: 99-C-98489/9
Period: August 1990-July 1991
Funding: $ 87,028
Award: Cooperative Agreement
Awardee: The RAND Policy Research Center
(See page 72)
Project Officer: Sheila O'Dougherty
Division of Reimbursement and Economic Studies
Mandate: Social Security Amendments of 1983 (Public Law 98-21)

Description: During this project, researchers will conduct an econometric study of the Medicare prospective payment system payment adjustment for indirect medical education costs. Prior work on this topic at RAND and elsewhere will be extended to account for interactions among indirect medical education, the disproportionate share adjustment, and other urban and rural differences. The study will show how hospitals with various size teaching programs will fare under a new formula relative to the current formula.

Status: This project is in the early developmental stage.

Financial Impact of Prospective Payment System on Hospitals

Data for Hospital Cost Monitoring and Analysis of Hospital Costs

Project No.: 500-87-0039
Period: January 1987-December 1991
Funding: $ 551,900
Award: Contract
Contractor: American Hospital Association
840 North Lake Shore Drive
Chicago, Ill. 60611
Project Officer: Kathleen K. Walker
Division of Reimbursement and Economic Studies
Mandate: Social Security Amendments of 1983 (Public Law 98-21)

Description: The Health Care Financing Administration (HCFA) will receive from the American Hospital Association (AHA) the output from its National Hospital Panel Survey and Annual Survey of Hospitals for fiscal years 1987-91. These data will serve as a prime source of outside data on the performance of hospitals and will be used in HCFA analyses, research, and publications.

Status: HCFA has received the Annual Survey of Hospitals for fiscal years 1987 and 1988, monthly *National Hospital Panel Survey Reports*, and monthly *Community Hospital Statistics* through March 1990. These data and reports are available only from the AHA.

Prospective Capital Payment: Refinements and Impacts

Project No.: 17-C-99232/1
Period: July 1988-July 1991
Funding: $ 357,331
Award: Cooperative Agreement
Awardee: Center for Health Economics Research
Hillsite Office Building
75 Second Avenue, Suite 100
Needham, Mass. 02194
Project Officer: William L. England
Division of Reimbursement and Economic Studies
Mandate: Social Security Amendments of 1983 (Public Law 98-21)

Description: In 1987 Congress imposed a 4-year moratorium on prospective capital payment and mandated that the Health Care Financing Administration (HCFA) incorporate capital into the prospective payment system by 1992. This project will support HCFA's activities by compiling and analyzing hospital capital statistics from Medicare cost reports (MCRs). The project consists of three tasks. The first will be a computer analysis of the data base to determine depreciation and interest expense and the average age of capital assets. The second will be to explore alternative data bases that may supplement results from the MCR data base. The third will be to develop simulation models of the impact of various capital reimbursement plans and exceptions policies.

Status: Work on this project was delayed to facilitate completion of the cost index and occupancy rate adjustments for the proposed capital payment policy. During the second year, analysis of the cost report data base was completed, and alternative data bases were reviewed. Further work on this and on simulation models are in progress.

Changes in Hospital Wages Since Implementation of the Prospective Payment System

Project No.: 17-C-99500/1
Period: October 1989-September 1991
Funding: $ 212,478
Award: Cooperative Agreement
Awardee: Health Economics Research, Inc. (HERI)
Hillsite Office Building
75 Second Avenue, Suite 100
Needham, Mass. 02194
Project Officer: Edgar A. Peden
Division of Reimbursement and Economic Studies
Mandate: Social Security Amendments of 1983 (Public Law 98-21)

Description: This project examines hospital cost inflation that results from increases in labor costs by using the Health Care Financing Administration's (HCFA's) wage surveys from 1982, 1984, and 1988; the American Hospital Association's (AHA's) annual surveys; and the Bureau of Labor Statistics' industry wage surveys. Labor costs account for over half of all hospital costs. These costs have been influenced by changes in hospital occupation mix, wage changes in comparable industries, changes in labor productivity, changes in inpatient volumes, and changes in the general inflation level. This project will be used to investigate linkages of these factors to changes in labor costs.

Status: The awardee has reviewed the literature on hospital and firm wage determination, constructed a model of wage determination, and made preliminary estimates of the model based on data received from HCFA, the Bureau of Labor Statistics, and the AHA.

A draft of the first year's work has been received. The awardee's findings to date indicate that the hospital wage index is not a pure measure of the opportunity cost of labor, but is influenced by such factors as the occupation mix, education and experience of the work force, hospital size, and unionization. During the second year, the awardee plans to reestimate the models using the HCFA survey of wages for 1988, analyze the factors determining the changes in the prospective payment system (PPS) wage index from 1984 to 89, and analyze differences between rural and urban hospital wages. The PPS wage areas currently in use will also be examined.

Monitoring Hospital Closures, Mergers, Openings, and Changes in Ownership

Project No.: 99-C-98526/1
Period: August 1990-July 1991
Funding: $ 97,729
Award: Cooperative Agreement
Awardee: Brandeis University Research Center
(See page 73)
Project Officer: Kathleen K. Walker
Division of Reimbursement and Economic Studies
Mandate: Social Security Amendments of 1983 (Public Law 98-21)

Description: To fulfill its responsibility to monitor changes in the hospital industry that potentially affect Medicare beneficiaries, the Health Care Financing Administration (HCFA) needs accurate and timely information on the number of and trends in hospital closures, mergers, openings, and ownership changes. Although Medicare survey and certification data and Medicare cost reports provide useful information of this type, they are not in themselves sufficient to provide a complete picture. Under this project, Brandeis will review the potential sources of information on significant changes in hospital status and design a strategy that HCFA can use to acquire and maintain detailed knowledge of these changes on an annual basis.

Status: This project is in the early developmental stage.

Rural Hospital Studies

Medical Assistance Facility Demonstration Project

Project No.: 95-C-99292/8
Period: June 1988-June 1994
Funding: $ 343,435
Award: Cooperative Agreement
Awardee: Montana Hospital Research and Education Foundation
P.O. Box 5119
Helena, Mont. 59604
Project Officer: Sheldon Weisgrau
Division of Hospital Experimentation
Mandate: Omnibus Budget Reconciliation Act of 1987
(Public Law 100-203)

Description: The Montana Hospital Research and Education Foundation (MHREF) is conducting a demonstration of the utility and desirability of medical assistance facilities (MAFs), limited-service hospital models located in remote rural frontier areas. The Montana legislature recently created the MAF, which is a new category of licensure for health care facilities providing low-intensity acute care services to short-term inpatients. MAFs are intended to maintain accessibility to basic acute and emergency care services and provide inpatient care before the patient is transported to a hospital, or care for no longer than 96 hours. These facilities will be located in counties with fewer than 6 residents per square mile or in areas more than 35 miles from the nearest hospital. In enacting Section 4008(i)(1) of Public Law 100-203, Congress provided the necessary authority to implement the demonstration. This 4-year project consists of 2 phases. Phase I is a feasibility study during the first year to address the technical issues, including payment formula, services covered, and design of a project evaluation. Phase II is the implementation, operation, and evaluation of the demonstration.

Status: MHREF invited 23 hospitals (having 20 or fewer beds and located more than 35 miles from the next nearest hospital) to participate in the demonstration. A total of 11 hospitals responded and MHREF selected 9 applicants for final consideration. Of these, 3 applicants chose to become demonstration sites in year 1 and 6 decided to participate as comparison sites. The Health Care Financing Administration (HCFA) and MHREF have worked to develop the MAF concept by defining services, staffing, equipment, etc., that will be available at each demonstration site. In addition, utilization and cost projections have been prepared in order to estimate the financial impact of the project on the facilities and on the Medicare program. HCFA and MHREF have developed conditions of participation and certification requirements, quality assurance and utilization review procedures, and payment systems for MAFs. The facilities will be subject to rigorous utilization and quality review by the peer review organization (PRO), including pre-admission and concurrent review of all inpatients in addition to the PRO's normal retrospective review procedures. Finally, MAFs will be reimbursed for the provision of all services on a reasonable cost basis by the Medicare and Medicaid programs. (Blue Cross and Blue Shield of Montana has also agreed to participate in the demonstration by reimbursing MAFs on a reasonable cost basis.) Congress provided the necessary authority to implement the demonstration in Section 4008(i)(1) of the Omnibus Budget Reconciliation Act of 1990. With the planning and development aspects of the demonstration largely completed, Phase II—the implementation and operation of MAFs at 3 sites in eastern Montana—is scheduled to begin early in fiscal year 1991.

Medical Assistance Facility Certification Criteria

Project No.: 99-C-99169/5
Period: August 1989-September 1990

Funding: $ 44,256
Award: Cooperative Agreement
Awardee: University of Minnesota Research Center
(See page 75)
Project Officer: Sheldon Weisgrau
Division of Hospital Experimentation
Mandate: Omnibus Budget Reconciliation Act of 1987
(Public Law 100-203)

Description: The primary purpose of this project is to explore the implications of using different types of remoteness criteria to identify the number and characteristics of rural hospitals that could conceivably qualify as medical assistance facilities (MAFs) or primary care hospitals (PCHs). MAFs and PCHs are limited-service hospital models designed to maintain access to basic emergency and acute care services in remote rural areas. The analysis will provide the Health Care Financing Administration (HCFA) with an indication of how many rural hospitals might become MAFs under different sets of assumptions.

Status: This project has been completed. A final report has been received in HCFA's Office of Research and Demonstrations. Findings from the final report conclude that about 5 percent of rural hospitals are likely to be qualified and interested in changing their status to MAF or PCH. These are primarily small hospitals (i.e., 20 or fewer beds) with a low average daily census (5 or less) that are also experiencing large operating losses (i.e., more than $250,000 per year). The report estimates that a range of no more than 100 to 150 hospitals would ultimately convert if these programs were implemented nationwide. The study shows that MAF and PCH qualifiers are quite different from the average rural hospital. They provide more limited services, have fewer beds, and are more likely to be certified to provide swing beds and/or long-term care. They are more likely to be publicly owned and less likely to be accredited by the Joint Commission on Accreditation of Healthcare Organizations. MAF and PCH qualifiers tend to be located in counties that have higher per capita incomes than other rural hospitals and smaller proportions of elderly residents. Medicare patients represent a smaller percentage of total patient census in these facilities. MAF and PCH qualifiers are disproportionately located in the west, north, central, and mountain census regions. Only a very small proportion is located east of the Mississippi River. There are also several differences between hospitals that qualify for conversion to MAFs and those that are likely to choose the PCH conversion option. Potential PCHs have fewer births and surgical procedures and are less likely to offer medical and surgical intensive care than probable MAF candidates, but are more likely to offer swing beds and long-term care services. Potential PCHs are located in counties with a higher average proportion of the population 65 years of age or older. Also, although about half of the potential candidates in both groups are located in the west, north, central, and mountain census regions, a higher proportion of MAF candidates are in the mountain region while a higher proportion of potential PCHs are in the west, north, and central regions. This study will assist HCFA in examining the consequences of each limited-service hospital option in terms of the number, characteristics, and location of the hospitals that are likely to participate.

Rural Health Care Transition Grants Program

Period: September 1990-September 1991
Funding: $ 17.76 million
Project Officer: William L. Damrosch
Division of Hospital Experimentation
Mandate: Omnibus Budget Reconciliation Act of 1987
(Public Law 100-203) (Amended by Section 6003(g)(1)(B) of the Omnibus Budget Reconciliation Act of 1989, Public Law 101-239)

Description: Congress appropriated $17.76 million in fiscal year (FY) 1990 to fund the Rural Health Care Transition Grants program. Funding for FY 1990 will provide grant monies to fund new awards for 1990, second-year funding for projects awarded in FY 1989, and the independent evaluation. These grants will support a variety of innovative projects to strengthen the capability of small rural hospitals and their communities to provide high-quality care to Medicare beneficiaries. Under this grants program, eligible rural hospitals may request up to $50,000 per year for up to 3 years. Hospitals receiving awards requested funds to support activities in such areas as enhancing outpatient and/or emergency services, recruiting health professionals, and developing alternative service delivery systems (including rural health care networks) to provide care more effectively. Hospitals qualified for this program if they were non-Federal, not-for-profit, short-term, general acute care hospitals located in rural areas (i.e., those currently being paid as rural hospitals under the Medicare hospital prospective payment system) and had fewer than 100 available beds (as defined in the Medicare cost report).

Status: On February 1, 1990, the Office of Research and Demonstrations within the Health Care Financing Administration (HCFA) mailed the solicitation announcement and application materials to each rural hospital. Applications from the hospitals were submitted to HCFA on or before May 1. HCFA received a total of 502 applications in response to the solicitation. Hospitals applying as part of a consortium (50 consortia) submitted 198 applications. Applications were received from hospitals in each State (except Alaska, Hawaii, and Massachusetts) in which there were eligible rural hospitals. Connecticut, Delaware, New Jersey, and Rhode Island have no eligible rural hospitals. Each application was reviewed for technical merit by a panel of experts. Of the 212 awards in FY 1990, 151 went to hospitals applying as individual facilities and 61 went to hospitals applying as part of a consortium (16 consortia). Each State with an eligible rural hospital that applied for this grants program received at least 1 award. Of the 184 grants awarded to 181 hospitals in

FY 1989, 3 declined their grants, 2 became ineligible during the year, and 5 did not request second-year funding; 171 hospitals requested and received second-year continuation funding totaling $7.4 million. HCFA continues to contract with Mathematica Policy Research, Inc., to evaluate the program and to provide technical support in monitoring the program.

Rural Health Transition Grant Evaluation

Project No.: 500-87-0028
Period: June 1989-May 1994
Funding: $ 1,443,524
Award: Technical Support: Evaluation of Demonstrations
(See page 76)
Contractor: Mathematica Policy Research, Inc.
P.O. Box 2393
Princeton, N.J. 08546-2393
Project Officer: Kathleen M. Farrell
Division of Hospital Experimentation
Mandate: Omnibus Budget Reconciliation Act of 1987
(Public Law 100-203)

Description: Mathematica Policy Research, Inc., will perform both pre- and post-award functions that include:

- Conducting initial reviews, grouping and abstracting proposals submitted for rural health transition grants, and mailing award notices to grantees.
- Monitoring grantees to determine that grants are being expended for the purposes for which they were made.
- Conducting an evaluation of the projects funded.
- Reporting to the Health Care Financing Administration the results of the monitoring, the perceived needs of rural hospitals, and the evaluation of the projects.

Status: The contractor has completed all pre-award functions for fiscal year (FY) 1990 grantees and has mailed 212 award letters to 211 hospitals with an effective date of September 15, 1990. FY 1989 grantees have had 1 year of operation during which 4 hospitals have withdrawn from the program, leaving 177 participating hospitals. The majority of the remaining grantees have started their programs successfully. Approximately 53 percent of the projects are running on or ahead of schedule, and none of the projects that are behind are having serious difficulties. Progress in meeting schedules varied slightly among projects with different objectives. Projects that involve inpatient service development or strategic planning were on or ahead of schedule while those that are developing beneficiary services or long-term care services are more likely to be behind. The main reason hospitals have gotten behind schedule is their inability to hire and retain key administrative and clinical staff. Factors that have contributed to projects being on or ahead of schedule include having a project fill an unmet need within the community, dedicated hospital staff and board members, and both financial and in-kind community support. The contractor has monitored the startup and progress of these projects and has written 2 semiannual Reports to Congress on the status of the program. There are 174 hospitals that were awarded second-year funding, and the contractor will continue monitoring these hospitals through site visits and semiannual reports submitted by the hospitals.

The Potential Use of Hospital Choice Models in Analyzing Essential Access Community Hospital and Rural Primary Care Hospital Designations

Project No.: 99-C-98526/1
Period: August 1990-July 1991
Funding: $ 69,705
Award: Cooperative Agreement
Awardee: Brandeis University Research Center
(See page 73)
Project Officer: Brigid Goody
Division of Reimbursement and Economic Studies
Mandate: Social Security Amendments of 1983 (Public Law 98-21)

Description: Brandeis University will present conceptual arguments on the strengths and weaknesses of alternative hospital choice models and their potential use in analyzing designations of Essential Access Community Hospitals (EACHs) and Rural Primary Care Hospitals under the EACH program. Brandeis will also consider broader applications of choice models to the analysis of hospital closures and other possible reconfigurations of rural hospital networks. As part of this analysis, Brandeis will use a readily available data set in a pilot application. Simulations based on a hospital choice model will be presented. Alternative specifications of this model as well as the feasibility of expanding its application to a national data base will also be evaluated.

Status: This project is in the early developmental stage.

Health Care for Poor and Rural Hospital Patients

Project No.: 99-C-98489/9
Period: August 1989-July 1990
Funding: $ 115,334
Award: Cooperative Agreement
Awardee: The RAND Policy Research Center
(See page 72)
Project Officer: Brigid Goody
Division of Reimbursement and Economic Studies
Mandate: Omnibus Budget Reconciliation Act of 1987
(Public Law 100-203)

Description: This project will be used to analyze how rural and inner city residents differ from other hospitalized Medicare patients with respect to quality of care, as measured by processes and outcomes adjusted for sickness at admission. The study is an extension of

existing research that identifies major differences in care between rural and inner city patients.

Status: A literature review of quality of care to poor hospital patients has been completed. A literature review of quality of care to rural hospital patients and a preliminary data analysis are under way. Final results of this study are expected in December 1990.

Access to Care in Rural and Inner City America

Project No.: 17-C-99498/1
Period: September 1989-September 1991
Funding: $ 166,934
Award: Cooperative Agreement
Awardee: Center for Health Economics Research
Hillsite Office Building
75 Second Avenue, Suite 100
Needham, Mass. 02194
Project Officer: John T. Petrie
Division of Reimbursement and Economic Studies
Mandate: Omnibus Budget Reconciliation Act of 1987
(Public Law 100-203)

Description: This project is designed to examine changes in utilization trends for 1985 through 1989 in the catchment areas of 23 hospitals that closed inpatient services during 1986-87. Researchers expect to determine whether closures significantly limit access to care for Medicare beneficiaries. In particular, they will examine the following aspects of health care utilization:

- Where patients obtain health care before and after hospital closures.
- The effects of hospital closures on utilization rates and on the place of care.
- The relationship between the use of physician services and changes in the availability of inpatient services.
- The impact of hospital closures on per capita Medicare expenditures, out-of-pocket costs, and travel distance to inpatient care.

Status: In a first-year report, the researchers described the characteristics of the 23 closing hospitals and those of neighboring hospitals. They described the method used to develop service areas for the closing hospitals and presented descriptive analyses of the service areas in terms of demographic characteristics and market share. Researchers also began analyzing patient travel patterns for inpatient care before and after the hospital closures took place.

Hospital Closures, Financial Status, and Access to Care: A Rural and Urban Analysis

Project No.: 17-C-99499/3
Period: September 1989-September 1991
Funding: $ 193,944
Award: Cooperative Agreement
Awardee: Georgetown University
37th and O Streets, NW.
Washington, D.C. 20057
Project Officer: Brigid Goody
Division of Reimbursement and Economic Studies
Mandate: Omnibus Budget Reconciliation Act of 1987
(Public Law 100-203)

Description: This project addresses why hospitals close and how closures affect access. A hospital-level analysis will be done to examine factors that cause hospitals to close. Closed hospitals will be compared with similar hospitals that remain open with respect to admissions, costs, Medicare and non-Medicare revenues, Medicare patients, and patterns of care. Separate analyses will be conducted for rural and urban areas to identify factors unique to each type of community. A patient-level analysis will compare patients of closed and open hospitals along the following dimensions—diagnostic mix, severity of illness, and patterns of care. In addition, these two groups of patients will be compared to determine whether closure has an adverse effect on access to or outcome of care.

Status: A data set for patient-level analysis is being created. Preliminary analysis on closed hospitals is being conducted. Final results on closed hospitals will be available in December 1990. Final results of the patient-level analysis will be available in December 1991.

Examination of Excluded Hospital Payment Methodologies

Developing and Evaluating Options for Pediatric Prospective Payment Systems

Project No.: 18-C-99093/1
Period: June 1987-April 1990
Funding: $ 340,000
Award: Cooperative Agreement
Awardee: Boston University Hospital
Health Care Research Unit
75 East Newton Street
Boston, Mass. 02118
Project Officer: John T. Petrie
Division of Reimbursement and Economic Studies
Mandate: Social Security Amendments of 1983
(Public Law 98-21)

Description: This study is designed to evaluate the pediatric-modified diagnosis-related groups (PM-DRGs) developed by the National Association of Children's Hospitals and Related Institutions under an earlier Health Care Financing Administration-funded cooperative agreement. In addition, researchers will develop the adjustments (e.g., teaching hospitals) to a

prospective payment system (PPS) that might be required for Medicare or State Medicaid programs to implement a PPS for pediatric hospital services. Work under this project will extend early evaluation of PM-DRGs to additional State data bases with birth weight. Under a subcontract with the National Perinatal Information Center at the Women and Infants' Hospital in Providence, Rhode Island, researchers will use a national data base to which ventilator time will also be appended. The project expands the analysis of the equity of proposed PPS options for tertiary hospitals and for hospitals treating a large share of Medicaid children. The PPS options for consideration by Medicare and State Medicaid programs will also be formulated.

Status: Researchers have completed a draft final report. Among the preliminary findings are:

- That a modified version of the PM-DRGs—incorporating birth weight but not ventilator time—performs substantially better than the DRGs in explaining variations in resource use at the level of the individual discharge.
- That in explaining variation in resource use at the hospital level, the PM-DRGs perform substantially better than the DRGs.

However, if teaching intensity is added as an independent variable, PM-DRGs and DRGs are roughly equal in explanatory power. The final report is expected by December 1990.

Analysis of the Tax Equity and Fiscal Responsibility Act for Reimbursement of Excluded Hospitals Under the Prospective Payment System

Project No.: 99-C-98526/1
Period: July 1989-January 1990
Funding: $ 34,902
Award: Cooperative Agreement
Awardee: Brandeis University Research Center
(See page 73)
Project Officer: Alvin L. Freedman
Division of Reimbursement and Economic Studies
Mandate: Social Security Amendments of 1983
(Public Law 98-21)

Description: This project evaluated the financial impacts of the Tax Equity and Fiscal Responsibility Act (TEFRA) on hospitals excluded from the Medicare prospective payment system. The analyses focused on the actual costs, target amounts, incentive payments, and gains or losses for these facilities, with special emphasis on identifying those facility types that are doing well or poorly under TEFRA. Financial information was stratified by type of specialized facility and by urban and rural census region locations.

Status: This project is completed. A final report entitled "Impact Analysis of the TEFRA System for Reimbursement of PPS-Excluded Hospitals" is available from the National Technical Information Service, accession number PB90-220179.

Other Studies

Determining the Appropriateness of Reclassifying a Ventilator-Dependent Unit as a Rehabilitation Unit for Purposes of Reimbursement

Project Nos.: 29-P-99424/5; 29-P-99397/5; 29-C-99404/1; 29-P-99408/3; 29-P-99401/3
Period: October 1989-September 1993
Award: Waiver only
Awardees: Mayo Foundation, St. Mary's Hospital, Rochester, Minn.
RMS Health Providers, Joint Venture of Suburban Hospital/Rush Presbyterian Hospital, Chicago, Ill.
Rhode Island Hospital, Providence, R.I.
Sinai Hospital of Detroit, Detroit, Mich.
Temple University Hospital, Philadelphia, Pa.
Project Officer: Thomas Talbott
Division of Hospital Experimentation
Mandate: Medicare Catastrophic Coverage Act of 1988
(Public Law 100-360)

Description: The demonstration will be used to determine the appropriateness of reclassifying ventilator-dependent units in hospitals as rehabilitation units for purposes of Medicare reimbursement. A comparison will be made of the cost of the services, quality of care, outcome, treatment patterns, etc., for each of the demonstration sites as well as the selected alternative sites in an effort to study modifications in reimbursement policy.

Status: Each site submitted a waiver cost estimate. All submissions have been consolidated into a single waiver cost package and the package is being reviewed. The demonstration is expected to start during the second quarter of fiscal year (FY) 1991. The evaluation design report for the demonstration is due the second quarter of FY 1991.

Evaluation of the Ventilator-Dependent Unit Demonstration

Project No.: 500-87-0029
Period: October 1989-September 1993
Funding: $ 773,815
Award: Technical Support: Evaluation of Demonstrations
(See page 76)
Contractor: Lewin/ICF
1090 Vermont Avenue, NW., Suite 700
Washington, D.C. 20005
Project Officer: Thomas Talbott
Division of Hospital Experimentation
Mandate: Medicare Catastrophic Coverage Act of 1988
(Public Law 100-360)

Description: Treating ventilator-dependent patients in hospitals is labor intensive, and the cost of the service often exceeds the present-day payment system under prospective payment. This project will evaluate five competitively selected demonstration sites that provide care for chronic ventilator-dependent patients. The evaluator will gather data from a representative sample of hospitals as well as the five demonstration sites to address such policy concerns as overall cost of care, quality, treatment patterns, and appropriate sites of care.

Status: In addition to evaluating the demonstration, Lewin/ICF was requested to assist in the preparation of the waiver cost estimate and to prepare an analysis paper describing reimbursement policy options. Both tasks have been completed. Lewin is awaiting approval of the waiver cost estimate which is required before the demonstration can commence. The anticipated approval and startup date of the demonstration is the second quarter of fiscal year 1991.

Program Efficiencies, Analyses, and Refinements

Clinical Laboratory Services

Volume-Adjusted Payment for Clinical Laboratory Services

Project No.: 99-C-99169/5
Period: August 1990-July 1991
Funding: $ 99,457
Award: Cooperative Agreement
Awardee: University of Minnesota Research Center
(See page 75)
Project Officer: Victor G. McVicker
Division of Hospital Experimentation

Description: The University of Pennsylvania is completing a project designed to examine the impact of practice setting and technology on the cost of producing laboratory services. The study has focused on the 35 clinical chemistry, hematology, and toxicology kits most commonly paid for by the Health Care Financing Administration in 1986 and 1987. This project will extend the current work to examine the profitability of performing these tests as a function of testing volume. The project will analyze several data sources and will validate the model with actual laboratories' data for the appropriate volume. Findings will be used to examine alternative payment methods.

Status: This project is in the early developmental stage.

Use of Market Force Dynamics to Set Medicare Fee Schedules

Project No.: 99-C-99168/3
Period: August 1990-July 1991
Funding: $ 69,750
Award: Cooperative Agreement
Awardee: Project HOPE Research Center
(See page 74)
Project Officer: Victor G. McVicker
Division of Hospital Experimentation

Description: This project has two major objectives. The first is to examine the potential for using market force dynamics to set Medicare fee schedules that approximate the prices that would be charged in a competitive market. Particular emphasis will be placed on the potential for competitive bidding to harness market force dynamics in a way that reduces Medicare expenditures. The second objective is to review a Medicare demonstration project that is designed to evaluate competitive bidding for clinical laboratory services. This project was designed in 1987, but not implemented. Vanderbilt University will examine the proposed bidding process, analyze probable bidding strategies for providers, and assess whether the design is still appropriate in light of changes in the industry since the demonstration was proposed.

Status: This project is in the early developmental stage. The analysis plan for the project has been received, and the final report is expected in Summer 1991.

Laboratory Industry Technology and Productivity Changes

Project No.: 99-C-99169/5
Period: August 1989-July 1991
Funding: $ 99,997
Award: Cooperative Agreement
Awardee: University of Minnesota Research Center
(See page 75)
Project Officer: Victor G. McVicker
Division of Hospital Experimentation

Description: This study is designed to examine the effects of technological advances on the cost of laboratory services in different provider and supplier settings. The subcontractor, the University of Pennsylvania, will undertake the following tasks:

- Conduct a thorough review of the available sources of data on test cost and quality.
- Examine the relative costs of producing a specific subset of clinical laboratory tests at different volumes and in different settings.
- Describe the temporal changes in the costs of performing selected tests because of technical changes and the relationship between cost and charges for those tests over time.
- Analyze how Medicare payments relate to the actual costs of those tests.

Status: The study is still in the developmental stage of gathering data on test costs and quality.

Durable Medical Equipment Services

Evaluation of Medicare Expenditures for Durable Medical Equipment

Project No.: 17-C-99215/1
Period: July 1988-January 1990
Funding: $ 152,143
Award: Cooperative Agreement
Awardee: Center for Health Economics Research
Hillsite Office Building
75 Second Avenue, Suite 100
Needham, Mass. 02194
Project Officer: Phyllis L. Morical
Division of Hospital Experimentation

Description: This project is intended to provide the Health Care Financing Administration with information on whether Medicare is paying fair market rates for durable medical equipment (DME). Little is known about how Medicare carriers have implemented DME reimbursement policies, the effects of these policies on DME reimbursement, geographic variation in DME expenditures and utilization, and rental rates of return for DME. This project is designed to study and address these issues.

Status: This project was extended because the Center for Health Economics Research was using Part B Medicare Annual Data files for 1984 through 1986 for a descriptive trend analysis; those files are quite inconsistent from year to year, creating a larger task than anticipated. Work on a carrier survey of application of inherent reasonableness guidelines is completed, and work continues on analyzing aspects of DME utilization and reimbursement in a 10-State sample. The 10 States are Alabama, Arkansas, Connecticut, Georgia, Kansas, Oklahoma, Oregon, Pennsylvania, Washington, and Wisconsin. The final report entitled "An Evaluation of Medicare Reimbursement Policies for Durable Medical Equipment" is available from the National Technical Information Service, accession number PB90-256298.

Demonstration and Evaluation of Competitive Bidding as a Method of Purchasing Durable Medical Equipment

Project No.: 500-85-0050
Period: September 1985-December 1990
Funding: $ 1,489,661
Award: Contract
Contractor: Abt Associates, Inc.
4800 Montgomery Lane
Bethesda, Md. 20814
Project Officer: Phyllis L. Morical
Division of Hospital Experimentation

Description: Abt Associates will test the feasibility of using competitive bidding as a method of establishing the prices Medicare pays for durable medical equipment. The contractor will also provide the Health Care Financing Administration (HCFA) with considerable information on whether the current payment levels for durable medical equipment are properly set. The project consists of three phases:

- Phase I. Design the bidding model, select demonstration sites, and prepare bidding documents.
- Phase II. Administer the bidding systems.
- Phase III. Evaluate the demonstration.

The total time of the project is 5 years.

Status: The Omnibus Budget Reconciliation Act (OBRA) of 1987 established a new Medicare reimbursement system for durable medical equipment and respiratory therapy services (collectively known as DME) effective January 1989 and prohibited demonstrations of alternative reimbursement systems for DME until January 1, 1991. As a result of the changes in the reimbursement system, a revised scope of work was approved that shifted the focus to the development of simulation models of Medicare payments for DME that can be used to estimate HCFA's costs under alternative reimbursement systems (e.g., pre- and post-OBRA) and variations thereof. The contractor will examine the DME ratesetting approaches of other third-party payers (such as the Department of Veterans Affairs, private insurance companies, and health maintenance organizations) to determine which systems result in competitively set prices, and, of those, which could be adapted for HCFA's use in administering Medicare. The scope of work includes a survey to examine beneficiaries' access to DME and DME supplier services on billing and maintenance and repair of equipment and a carrier jurisdictional study on the effect of HCFA's point of sale policy. The study will project the impact of changing jurisdictional alignments. All activities and reports for this project are expected to be finalized by December 1990.

End Stage Renal Disease

End Stage Renal Disease Nutritional Therapy Study

Period: September 1984-August 1994
Award: Interagency Agreement
Agency: National Institutes of Health
National Institute of Diabetes and Digestive and Kidney Disease
Bethesda, Md. 20892
Project Officer: Arne H. Anderson
Division of Health Systems and Special Studies
Mandate: Omnibus Reconciliation Act of 1980 (Public Law 96-499)

Description: In accordance with the congressional mandate, this study, known as the Modification of Diet in Renal Disease Study, is a multicenter cooperative clinical study designed to ascertain whether restriction of dietary protein and phosphorus and/or reduction of blood pressure well below the currently accepted target of 140/90 will reduce the rate of progression of chronic renal disease regardless of the nature of the primary underlying process. The study is being conducted jointly

by the National Institutes of Health (NIH) and the Health Care Financing Administration (HCFA).

Status: Phase I, the developmental phase, began in September 1984 and ended in December 1985. This phase produced a clinical protocol, forms manual, and operation manual. Phase II, a 2-year pilot study, began in January 1986 at 9 clinical sites. Phase III, the full-scale clinical study, began in January 1989 at 15 clinical sites and is to run until December 31, 1992. At the conclusion of this phase, NIH will determine to what extent the dietary restrictions and blood pressure reduction result in a reduced rate of progression of chronic renal disease. HCFA is responsible for conducting the cost-effectiveness component of the study if the therapy is found to be effective. The following questions will be addressed in the cost analysis to be conducted by HCFA:

- Is nutritional therapy cost effective in the treatment of patients in the study?
- Is nutritional therapy less costly to HCFA than the current payment for dialysis and transplantation?
- Is payment for nutritional therapy under HCFA administratively feasible?
- Can the therapy be effectively managed?

Relative Effectiveness and Cost of Transplantation and Dialysis in End Stage Renal Disease

Project No.: 14-C-98372/5
Period: September 1983-April 1990
Funding: $ 1,811,126
Award: Cooperative Agreement
Awardee: University of Michigan
Department of Epidemiology
109 Observatory Street
Ann Arbor, Mich. 48109
Project Officer: Carl E. Josephson
Division of Program Studies

Description: This study performed a comprehensive assessment of end stage renal disease (ESRD) patients under different treatment modalities. The study's objectives were to impanel a cohort of ESRD patients at the point of entry into the Michigan Kidney Registry between 1980 and 1986 and to quantify differences between the two main modalities of care (transplantation and dialysis) and their subgroups for survival, costs, and quality of life. Ancillary aims included life-table analyses to measure differences in survival of patients in these modalities while controlling for age, sex, race, and the major concomitant diseases—diabetes mellitus, hypertension, and glomerulonephritis. The study also observed the effect of introducing the drug Cyclosporin A in 1983.

Status: This project has been completed. The final report discusses the results derived from the three major research areas—quality of life, survival, and cost effectiveness—as well as auxiliary studies in the area of racial disparity in diabetic ESRD, recovery from ESRD, aspects of mortality, and preventing kidney disease of diabetes mellitus. The final report is expected to be available from the National Technical Information Service by the end of 1990.

Cause and Failure to Transplant Cadaveric Human Organs

Project No.: 17-C-98728/1
Period: August 1986-July 1989
Funding: $ 699,740
Award: Cooperative Agreement
Awardee: Brandeis University
415 South Street
Waltham, Mass. 02254
Project Officer: Paul W. Eggers
Division of Beneficiary Studies
Mandate: National Organ Transplant Act
(Public Law 98-507)

Description: This project examined the reasons for the high rate of wastage of cadaveric kidneys in the United States.

Status: Data collection began on January 1, 1988, and continued through December 31, 1988. At the end of the study, data were available on 3,503 kidneys with discard information on 181 kidneys. A draft final report was received in the Office of Research and Demonstrations in June 1990. Revisions are expected in Fall 1990. Major findings include:

- The overall wastage rate in 1988 was 5 percent, down considerably from the 20-percent rate in 1980.
- Reasons for failure to transplant were anatomical abnormalities, 17 percent; donor and organ pathologies, 32 percent; surgical complications, 11 percent; preservation and perfusion problems, 9 percent; and all other reasons, 31 percent.

Cost and Outcomes from Different End Stage Renal Disease Treatment Modalities

Project No.: 500-90-0050
Period: September 1990-September 1991
Funding: $ 200,039
Award: Contract
Contractor: The Urban Institute
2100 M Street, NW., Suite 400
Washington, D.C. 20037
Project Officer: Joel Greer
Division of Beneficiary Studies
Mandate: Omnibus Budget Reconciliation Act of 1986
(Public Law 99-509)

Description: The project will study the cost effectiveness of different treatment regimens for end stage renal disease (ESRD) and will compare quality of life indicators for these regimens. It is generally believed that transplant patients do better and have lower medical costs than do dialysis patients. However, the cost of dialysis and physician oversight of dialysis patients has been tightly controlled. Transplant costs have risen

because of inflation in hospital services and in the use of more expensive immunosuppressive drugs. Therefore, the relative cost effectiveness of transplantation compared to dialysis may have decreased. There is little consensus about the impacts of different dialysis modalities. Because of a shortage of cadaveric kidneys, medical contraindications, and graft rejections, many ESRD patients remain on dialysis. The outcomes and costs of the various dialysis therapies need to be explored. Using Health Care Financing Administration (HCFA) data, the contractor will estimate the economic impacts, compare hospitalization and mortality outcomes, and examine case mix and selection issues for alternative treatment modalities. The results of these studies will be of use to practicing physicians who must guide ESRD patients toward the most appropriate modality and of use to the Congress and HCFA in formulating policy.

Status: The project is in the early developmental stage.

Predictors of Cost and Success in Kidney and Heart Transplantation

Project No.: 17-C-99183/0
Period: June 1988-February 1991
Funding: $ 235,118
Award: Cooperative Agreement
Awardee: Battelle Human Affairs Research Centers
4000 NE. 41st Street
Seattle, Wash. 98105
Project Officer: Lawrence E. Kucken
Division of Beneficiary Studies

Description: This project will examine the patient and organizational characteristics that determine successful kidney and heart transplantation outcomes. Using multivariate life-table methods, data from the Medicare program will be combined with information from surveys of transplant facilities to construct a model of transplant facility effectiveness.

Status: Data collection has been completed and data analysis activities are under way.

Review of the First Year of Medicare Coverage of Erythropoietin

Project No.: 500-90-0051
Period: September 1990-September 1991
Funding: $ 222,627
Award: Contract
Contractor: The Johns Hopkins University
Program for Medical Technology and Practice Assessment
1830 East Monument Street, Room 8061
Baltimore, Md. 21205
Project Officer: Joel Greer
Division of Beneficiary Studies
Mandate: Omnibus Budget Reconciliation Act of 1986
(Public Law 99-509)

Description: The Health Care Financing Administration (HCFA) began covering human recombinant erythropoietin (EPO) in June 1989, 1 month after the drug was approved by the Food and Drug Administration. This study will examine usage patterns, costs, outcomes, and cost effectiveness of EPO following its coverage by HCFA. The impacts of HCFA's reimbursement policies on EPO access, dosage, costs, and burden sharing will be examined, and the effects of payment policies will be analyzed. EPO is produced by normally functioning kidneys to regulate the amount of oxygen-carrying red blood cells. Dialysis patients usually have low hematocrits and many suffer from symptoms of anemia such as malaise, shortness of breath, and an inability to work or exercise. Prior to EPO, blood transfusions were the main form of treatment. According to clinical trials, EPO can cure anemia in over 90 percent of dialysis patients, but it must be taken continually to prevent recurrence. EPO costs Medicare an estimated $200 million per year, and the use of EPO continues to increase. Furthermore, preliminary data indicate that only 40-45 percent of EPO recipients are reaching their target hematocrits. This study will document the diffusion of EPO among the dialysis population; examine outcome measures including hematocrits, hospitalizations, and mortality; estimate the costs; and project the impacts of alternative payment policies.

Status: The project is in the early implementation stage.

Impact of Payment Changes on Medicare: Case of End Stage Renal Disease

Project No.: 17-C-99021/3
Period: June 1987-June 1990
Funding: $ 510,000
Award: Cooperative Agreement
Awardee: The Urban Institute
Health Policy Center
2100 M Street, NW.
Washington, D.C. 20037
Project Officer: Carl E. Josephson
Division of Program Studies
Mandate: Omnibus Budget Reconciliation Act of 1986
(Public Law 99-509)

Description: This project was part of an ongoing effort to monitor several components of Medicare's end stage renal disease (ESRD) program. The major thrust of this project was to measure the impact of 2 recent reductions in the composite payment rate on access to and quality of care provided to ESRD patients. Information for this study was derived from summaries of medical care records and other supplementary sources for past patients in both hospital-based and freestanding dialysis centers. The initial effort concentrated on assessing the impact of the $12 reduction of the composite rate in 1983. This task included analysis of morbidity and mortality associated with ESRD, in concert with the

study mandated by Congress in Section 9335(b)(2) of Public Law 99-509. As soon as the data became available, the same protocol was followed to measure the impact of the additional $2-composite rate reduction instituted in 1986. Another issue studied in this project was the impact of dialyzer reuse on patient mortality, morbidity, and kidney transplantation, which is part of the Health Care Financing Administration's ongoing interest in measuring and tracking ESRD patient outcomes.

Status: An interim report was received and included in a Report to Congress, "Impact of the Changes in the End Stage Renal Disease Composite Rate." The report is available from the Superintendent of Documents, U.S. Government Printing Office, stock number 017-060-00311-1. The cost is $10.00 domestic; $12.50 foreign. The awardee is in the process of reestimating the impact of the 1983 and 1986 composite rate changes on mortality and morbidity with data current through 1988. Other papers and topics being prepared include impact of shorter time, conventional dialysis; racial differences in outcomes of kidney transplants; a 10-year followup on the impact of dialyzer reuse on patient mortality; and the effects of cyclosporine on living related-donor kidney grafts.

End Stage Renal Disease Annual Research Report

Funding: Intramural
Project Director: Paul W. Eggers
Division of Beneficiary Studies

Description: The annual reports are designed to produce a wide range of data and analyses regarding the end stage renal disease (ESRD) program. Much of the data in these reports emphasize trends and comparisons over time, making these reports standard reference sources illustrating changes in the nature of the Medicare ESRD population and in the pattern of treatment of this population.

Status: The most recent published report is Health Care Financing Administration: *Research Report: End Stage Renal Disease, 1987.* HCFA Pub. No. 03288. Bureau of Data Management and Strategy. Washington. U.S. Government Printing Office, September 1989. While supplies last, complimentary copies of this report are available from the Health Care Financing Administration, Bureau of Data Management and Strategy, Office of Statistics and Data Management, Division of Information Analysis, Third Floor, Security Office Park Building, 6325 Security Boulevard, Baltimore, Maryland 21207. Telephone requests can be made to (301) 597-3933.

Study of the Medicare End Stage Renal Disease Program

Project No.: 14-C-99338/3
Period: September 1988-March 1991
Funding: $ 1,719,890
Award: Cooperative Agreement
Awardee: National Academy of Sciences
Institute of Medicine
2101 Constitution Avenue, NW.
Washington, D.C. 20418
Project Officer: Carl E. Josephson
Division of Program Studies
Mandate: Omnibus Budget Reconciliation Act of 1987
(Public Law 100-203)

Description: Section 4036(d) of Public Law 100-203 mandates that the Secretary of Health and Human Services conduct a study to examine the following issues:

- Access to treatment both by individuals with chronic kidney failure eligible for Medicare benefits and by those not eligible for such benefits.
- Quality of care provided to end stage renal disease (ESRD) beneficiaries, as measured by clinical indicators, functional status of patients, and patient satisfaction.
- Effect of reimbursement on quality of treatment.
- Major epidemiological and demographic changes in the ESRD population that may affect access to treatment, quality of care, or the resource requirements of the program.
- Adequacy of existing data systems to monitor these matters on a continuing basis.

Status: The Institute of Medicine (IOM) appointed a 16-member study committee in October 1988 to develop a protocol to meet the congressional objectives and to direct the implementation of the study. The full committee met on 7 occasions during 1989 and 1990, held several smaller subcommittee meetings, hosted 2 public hearings, solicited oral and written testimony, commissioned several papers, and entered into subcontracts for analyses of data. Additional analyses of Medicare program data were performed by the IOM study staff. The final report is expected to be submitted to Congress in early Spring 1991.

Data Development

Medicaid Tape-to-Tape: Research Data and Analysis

Project No.: 500-86-0016
Period: March 1986-March 1991
Funding: $ 5,141,406
Award: Contract
Contractor: SysteMetrics/McGraw-Hill
104 West Anapamu Street
Santa Barbara, Calif. 93101
Project Officers: Penelope L. Pine and David K. Baugh
Division of Program Studies

Description: This project continues the development and implementation of a Medicaid person-level data set from the 5 State Medicaid Management Information Systems (MMISs) in California, Georgia, Michigan, New York, and Tennessee. Data on enrollment, claims, and providers for 1985 through 1988 will be acquired. These data will be used to create uniform files, provide

descriptive reports, support analysis and evaluation, and develop methodology for online data base management. This project will provide a continuum of 9 years of uniform Medicaid data for analyzing program management, evaluating policy alternatives, and providing feedback to States in the area of Medicaid financing.

Status: Currently, project staff are acquiring and processing person-level enrollment, claims, and provider data obtained from State MMISs. Project staff are also linking the data base to other kinds of health statistics to expand the uses of the data. The project will continue to produce early return tabulations that summarize enrollment, utilization, and expenditure data for each year and each participating State. Research is under way on a series of special topics including capitation in Medicaid, mental illness, inpatient hospital use by Medicaid children, hospital reimbursement, Medicaid drug utilization, services to pregnant women and infants, physician volume, acquired immunodeficiency syndrome, long-term care, and Medicaid providers. The following reports have been published:

- Adams, E.K., Ellwood, M.R., and Pine, P.L.: Utilization and Expenditures under Medicaid for Supplemental Security Income Disabled. *Health Care Financing Review*. Vol. 11, No. 1, HCFA Pub. No. 03286. Health Care Financing Administration, Office of Research and Demonstrations. Washington. U.S. Government Printing Office, Fall 1989.
- Andrews, R.M., Keyes, M.A., and Pine, P.L.: Acquired Immunodeficiency Syndrome in California's Medicaid Program, 1981-84. *Health Care Financing Review*. Vol. 10, No. 1, HCFA Pub. No. 03274. Health Care Financing Administration, Office of Research and Demonstrations. Washington. U.S. Government Printing Office, Fall 1988.
- Burwell B., Adams, E.K., and Mieners, M.: Spend-down to Medicaid Eligibility Among Nursing Home Recipients in Michigan. *Medical Care*, Vol. 28, No. 4, April 1990.
- Health Care Financing Administration: *High Volume and High Payment Procedures in the Medicaid Population*. Report to Congress. HCFA Pub. No. 03289. U.S. Department of Health and Human Services. Washington. September 1989.
- Howell, E.M., and Brown, G.A.: Prenatal, Delivery, and Infant Care under Medicaid in Three States. *Health Care Financing Review*. Vol. 10, No. 4, HCFA Pub. No. 03284. Health Care Financing Administration, Office of Research and Demonstrations. Washington. U.S. Government Printing Office, Summer 1989.
- Ray, W., Griffin, M., and Baugh, D.: Mortality Following Hip Fracture Before and After Implementation of the Prospective Payment System. *Archives of Internal Medicine*. Vol. 150, No. 10, pp. 2109-2114.

Medicaid Analysis Project for States

Project No.: 500-90-0045
Period: September 1990-September 1991 (4 optional years)
Funding: $ 980,333
Award: Contract
Contractor: SysteMetrics/McGraw-Hill
104 West Anapamu Street
Santa Barbara, Calif. 93101
Project Officer: Penelope L. Pine
Division of Program Studies

Description: The general purpose of this contract is to extend the collection and data activities of person-level data from Medicaid Management Information Systems (MMISs) maintained by the States. Data will be collected for the five States that are currently participating in the Medicaid Tape-to-Tape project while providing an appropriate interface with the Medicaid Statistical Information System (MSIS). Activities will include standard descriptive tabulations, "Early Returns" reports, and feedback to the State Medicaid agencies. The focus of work will be to:

- Obtain person-level data on Medicaid enrollment, use, payments, and providers from State MMISs.
- Develop uniform data file structures to facilitate the comparison of Medicaid programs among States.
- Produce streamlined research data bases to support analysis of policy and program management alternatives for Medicaid.
- Provide a consistent complementary link between tape-to-tape activities and the developing MSIS.
- Produce person-level data files from the MSIS to study the validity and consistency of these data for research.

Status: This project is in the early developmental stage.

Program Statistics Series Reports and Health Care Financing Research Briefs

Funding: Intramural
Project Director: Charles R. Helbing
Division of Program Studies

Description: These statistical reports, notes, and briefs describe, monitor, measure, and evaluate Medicare program benefits, initiatives, operations, and performance. The annual Medicare benefit reports are mandated by the Social Security Law. Other program reports, notes, and briefs are either mandated by Congress, as background for current legislative policy initiatives, or reflect prevailing health care issues.

Status: The following *Health Care Financing Notes* and *Research Briefs* have either been completed or have been sufficiently developed so that usable data are available on request:

- "Use of Specialty Hospitals by Medicare Beneficiaries, 1985."
- "Use and Cost of Short-Stay Hospital Services Under Medicare as Related to Future Policy and Benefit Reform: Calendar Year 1985."
- "Use and Cost of Short-Stay Hospital Inpatient Services Under Medicare: Calendar Year 1985."
- "Use and Cost of Hospital Outpatient Services Under Medicare, 1987."
- "Medicare: Short-Stay Hospital Services, by Leading Diagnosis-Related Groups, 1983 and 1985."
- "Medicare: Participating Providers and Suppliers of Health Services, December 1985."
- "Raising the Age of Eligibility for Medicare to Age 67."
- "Medicare: Use and Cost of Skilled Nursing Care Facilities, 1986."
- "Use and Cost of Short-Stay Hospital Inpatient Services Under Medicare, 1986."
- "Medicare: Use of Home Health Services, 1985."
- "Medicare: Use and Charges for Inpatient Services in Short-Stay Hospitals, by Diagnosis-Related Groups, Calendar Years 1981 and 1984."
- "Use and Cost of Home Health Agency Services Under Medicare: Selected Calendar Years 1974-86."
- "Use and Cost of Home Health Agency Services Under Medicare, 1988."
- "Use and Cost of Physician and Supplier Services Under Medicare, 1988."
- "Medicare: Short-Stay Hospital Services, by Leading Diagnosis-Related Groups, 1984 and 1986."
- "Leading Inpatient Surgical Procedures for Aged Medicare Beneficiaries, 1988."
- "Use and Cost of Short-Stay Hospital Inpatient Services under Medicare, 1988."
- "Use and Cost of Skilled Nursing Facility Services under Medicare, 1988."
- "Medicare Participating Providers of Services, 1990."

Medicare Beneficiary Health Status Registry

Project No.:	500-90-0053
Period:	April 1990-September 1992 September 1990-September 1991 (Design Phase) September 1991-September 1992 (Field Test Phase)
Funding:	$ 1.3 million $ 396,940 (Design Phase) $ 951,366 (Field Test Phase)
Award:	Contract
Contractor:	Research Triangle Institute P.O. Box 12194 Research Triangle Park, N.C. 27709-2194
Project Officer:	Steven L. Hass Division of Beneficiary Studies

Description: The Medicare Beneficiary Health Status Registry (MBHSR) is a longitudinal data base that will combine survey data on the elderly with Medicare's administrative data files. As currently envisioned, the survey data will be collected through a telephone interview of 5 percent (90,000) of the elderly as they enter the Medicare program and at 5-year intervals thereafter. Data will be gathered on risk factors, functional status, sociodemographic variables, medical history, and quality of life. This contract is for the development of the survey instrument. The optional second year of the contract will involve a field test of the instrument. The MBHSR data will be used to:

- Measure and evaluate the impact of health status (and its components) on the use and cost of services.
- Model and project health service utilization and cost based on prior utilization and patient characteristics.
- Set rates for health maintenance organization members and others based on the adjustments that can be described and developed from the MBHSR's data.
- Explore hypotheses about the relationship of variables gathered by the MBHSR with the outcomes of medical and surgical treatment.
- Provide prevalence and incidence data based on State, county, or standard metropolitan statistical area.
- Monitor the Department of Health and Human Services' "Healthy People 2000" objectives and establish future objectives.

Status: This project is in the early developmental stage.

Medicare and Medicaid Data Book

Funding:	Intramural
Project Directors:	Thomas W. Reilly and Herbert A. Silverman Division of Program Studies

Description: This report provides descriptive statistics on the Medicare and Medicaid programs and serves as a resource for public officials, researchers, policy analysts, and users and providers of health care. The report includes:

- A brief overview of the Medicare and Medicaid programs, and information on the relationships between the programs.
- Trends in the use and cost of Medicare and Medicaid benefits.
- Detailed information and statistics on the Medicare program, including eligibility, benefits, financing, and administration for both the hospital insurance and supplementary medical insurance programs.
- Detailed information and statistics on the Medicaid program, including eligibility criteria, recipient characteristics, benefit coverage, service use, expenditures, financing, and administration.
- Appendices that provide addresses of Medicare intermediaries and carriers, Medicaid State agencies, medical assistance programs, and the offices in the Health Care Financing Administration responsible for the various facets of the Medicare and Medicaid programs.

Status: The *Medicare and Medicaid Data Book, 1990* is expected to be available in Winter 1991. Previous issues may be ordered from the Superintendent of Documents, U.S. Government Printing Office. The 1988 edition is stock number 017-060-00214-0, and the cost is $7.50

domestic; $9.36 foreign. The 1986 edition is stock number 017-060-00201-8, and the cost is $8 domestic; $10 foreign. The 1984 edition is stock number 017-070-00412-1, and the cost is $6.50 domestic; $8.13 foreign.

The Disease and Cost Impact of Influenza Epidemics on Medicare

Funding: Intramural
Project Director: Marshall McBean
Division of Beneficiary Studies

Description: Influenza epidemics occur almost every year and result in unnecessary disease, hospitalization, and costs to the Medicare population. The morbidity and costs in a nonepidemic year (1980-81) will be compared with those in the epidemic years of 1981-82, 1982-83, 1983-84, 1984-85, and 1985-86.

Status: Data have been incorporated into the description of the secular trends in pneumonia in elderly beneficiaries.

Incidence of Selected Cancers Among Elderly Medicare Beneficiaries

Funding: Intramural
Project Director: Marshall McBean
Division of Beneficiary Studies

Description: The incidence of several types of cancer (e.g., lung, prostate, colon, cervix, uterus, pancreas, and esophagus) reported by five States and included in the surveillance, epidemiology, and end results network of the National Cancer Institute will be compared with estimates of the incidence of cancer developed from the Health Care Financing Administration's (HCFA's) Medicare provider analysis and review files. Cancer rates will be compared for 1986 and 1987. If the HCFA data give good approximations, cancer rates and maps will be developed for all States.

Status: Data collection for cancer of the lung, prostate, colon, cervix, uterus, pancreas, and esophagus has begun.

Patterns and Outcomes of Cancer Care in the Medicare Population

Funding: Intramural
Project Directors: James D. Lubitz and Gerald F. Riley
Division of Beneficiary Studies

Description: More than half of all cancer patients have Medicare coverage. This study focuses on these patients' Medicare utilization from time of diagnosis through a data base that links Medicare data with cancer registry data collected through the National Cancer Institute's surveillance, epidemiology, and end results (SEER) program. The SEER program covers about 10 percent of the U.S. population. This data base contains information on the anatomic site of the primary cancer, histology, stage of the disease at diagnosis, and date of diagnosis for each new case of cancer in the geographic areas covered by the program. Linking SEER and Medicare data will provide opportunities for research on issues of access to medical care, costs of medical care obtained by cancer patients, and patterns of different types of medical care received by cancer patients diagnosed with different sites, stages, and histologies of cancer. Some specific questions to be addressed are:

- What are overall Medicare costs, by type of cancer and within cancer type, by stage of disease?
- What comorbidities are associated with cancer and how do they influence Medicare use and cost?
- What is the mix of care—on a per-person basis—among community hospitals, teaching hospitals, and cancer centers?

Status: SEER and Medicare data have been linked for eight of nine registries for all cases diagnosed from 1973 to 1986. Researchers are planning initial studies on total Medicare costs incurred by cancer patients and will present costs by stage at diagnosis, by demographic variables, and by geographic area. Additional linkages between SEER and Medicare will be made in Spring 1991 for cases from the San Francisco-Oakland registry and for cases diagnosed in 1987-89 from all registries.

Trends and Patterns in Place of Death for Aged Medicare Enrollees

Funding: Intramural
Project Director: Alma B. McMillan
Division of Beneficiary Studies

Description: This study examines trends and patterns in place of death for aged Medicare enrollees from 1979 through 1986. The analysis focuses on changes in place of death during a pre-prospective payment system (PPS) period (1979 through 1983) and a post-PPS period (1983 through 1986). Changes as measured by percent distributions were analyzed for deaths in hospitals, nursing homes, and patients' homes. Patterns by age, marital status, geographic location, and selected causes of death were also examined.

Status: Data from the *Vital Statistics of the United States*, produced by the National Center for Health Statistics, were analyzed to examine patterns and trends in place of death for persons 65 years of age or over from 1980 through 1986. Analyses indicate that there was a modest decline in deaths in the hospital inpatient setting after implementation of PPS. An increase in at-home deaths and a large decline in hospital deaths for cancer patients suggest, however, that increased availability of hospice care and other factors have shifted the place of death for cancer cases. This study will appear in the Fall 1990 issue of the *Health Care Financing Review*.

Hospitalization Rates and Mortality Study

Funding: Intramural
Project Director: Gerald F. Riley
Division of Beneficiary Studies

Description: Previous studies by other researchers have shown considerable variation among geographic areas in the rates at which selected procedures are performed on the Medicare elderly. This study provides hospitalization rates associated with 14 procedures commonly performed on the elderly for all U.S. metropolitan statistical areas and rural areas within States. The study also provides small-area rates of hospitalization for 26 diagnostic categories, including those defined in the hospital-specific mortality data release. Complementing the rates of hospitalization in the study are 3 types of mortality rates, all developed on the same small-area basis as the hospitalization data. The 3 types of mortality rates are number of deaths within 30 days of admission per 1,000 hospital discharges, number of deaths within 30 days of admission per 1,000 Medicare enrollees, and total number of deaths per 1,000 Medicare enrollees. The last type of mortality rate applies to diagnostic categories and not to procedures. The project is designed to:

- Obtain data on hospitalization from the 100-percent Medicare provider analysis and review file for 1986.
- Obtain data on total deaths by underlying cause for the aged population from the National Center for Health Statistics.
- Compute age and sex-adjusted small-area rates of hospitalization and mortality.
- Derive summary statistics and graphs (e.g., coefficients of variation, correlations, maps, and boxplots).

Status: Results of the study were published in a 2-volume set in June 1990. Volume 1 is entitled *Hospital Data by Geographic Area for Aged Medicare Beneficiaries: Selected Diagnostic Groups, 1986*; Volume 2 is entitled *Hospital Data by Geographic Area for Aged Medicare Beneficiaries: Selected Procedures, 1986*. Single copies of Volume 1, stock number 017-060-00410-0, and Volume 2, stock number 017-060-00411-8, are available from the Superintendent of Documents, U.S. Government Printing Office. The cost of each volume is $17.00 domestic; $21.25 foreign. Analysis of the data is continuing.

Rehospitalization Study

Funding:	Intramural
Project Director:	Gerald F. Riley Division of Beneficiary Studies

Description: In December 1987, the Health Care Financing Administration (HCFA) released hospital-specific mortality data to the public. The reason for releasing these data was to serve the public interest in quality of health care by providing information that hospitals, physicians, and consumers could use to help make decisions about selection of health care providers. HCFA is interested in releasing additional data to serve the same purpose. This study is designed to develop alternative outcomes (to mortality) for eight surgical procedures that could be useful in public releases as quality of care indicators. Primarily, this project is looking at the utility of rehospitalization rates as quality of care indicators. This project is designed to:

- Develop outcome measures using the 100-percent Medicare provider analysis and review file. Rehospitalizations will be examined as well as adverse events occurring during the surgical stay.
- Convene panels of physicians to review data and make suggestions about identifying poor outcomes that could reflect quality of care problems.
- Develop rates of categories of adverse outcomes by demographic characteristics and by metropolitan statistical areas and rural areas within States.

Status: Three specialty panels of physicians were convened to identify adverse outcomes occurring during the initial stay or associated with a readmission. Rates of adverse outcomes were subsequently developed for the initial stay and for readmissions. The results of the study were published in June 1990 as a special report entitled *Rehospitalization by Geographic Area for Aged Medicare Beneficiaries: Selected Procedures, 1986-87.* Survival analysis will be conducted for individuals in this report who had a revascularization (percutaneous transluminal coronary angioplasty or coronary artery bypass surgery) and a new myocardial infarction versus those individuals who had a revascularization and an old myocardial infarction. Single copies of the report are available from the Superintendent of Documents, U.S. Government Printing Office, stock number 017-060-00413-4. The cost is $27.00 domestic; $33.75 foreign. Analysis of the data is continuing.

International Comparative Data and Analyses of Health Care Financing and Delivery Systems

Project No.:	500-88-0009
Period:	May 1988-May 1993
Funding:	$ 200,046
Award:	Contract
Contractor:	The Organization for Economic Cooperation and Development 2, rue André-Pascal 75775 Paris CEDEX 16 France
Project Officer:	C. McKeen Cowles Division of Reimbursement and Economic Studies

Description: The Organization for Economic Cooperation and Development (OECD) originally consisted of the developed Western European nations plus the United States and Canada. OECD currently comprises 24 countries on 4 continents. The focus of this project is to develop, update, and refine an internationally comparable data base on health care spending patterns, prices, utilization, and delivery system characteristics in the OECD countries. The data developed under this contract will provide the basis for a series of analytical papers comparing international health systems and international variation in medical practice patterns (e.g., diagnostic-specific utilization of acute care inpatient facilities). The data are unique in

that substantial efforts have been undertaken to make the data nearly compatible across countries. As a result, the data developed under this contract provide the best possible contemporary basis for performing cross-national comparisons of health systems.

Status: The contract has generated tabular data on expenditures, pricing, utilization, practice patterns, and general economic background information covering 1960 through 1987. More than a dozen papers on a variety of topics relating to international comparative health services research have been produced. The articles and data produced under this contract in its first year were published in the 1989 Annual Supplement of the *Health Care Financing Review* entitled "International Comparison of Health Care Financing and Delivery: Data and Perspectives." Single copies are available from the Superintendent of Documents, U.S. Government Printing Office, stock number 717-011-00024-4. The cost is $6.00 domestic; $7.50 foreign.

Noncovered Services

Impact of Psychological Intervention on Health Care Utilization and Cost: A Prospective Study

Project No.: 11-C-98344/9
Period: September 1983-December 1988
Funding: $ 936,002
Award: Cooperative Agreement
Awardee: Hawaii State Department of Social Services and Housing
P.O. Box 339
Honolulu, Hawaii 96809
Project Officer: Bonnie M. Edington
Division of Health Systems and Special Studies

Description: The goal of this project is to determine whether short-term mental health treatment will reduce Medicaid utilization and costs on the island of Oahu, Hawaii. Medicaid eligibles who were in any of 3 high-risk groups were randomly assigned to experimental or control group status. The 3 groups are persons 55 years of age or over, persons in the upper 15 percentile of health care utilizers, and persons with specific illnesses that have psychosomatic components. The experimental group receives special outreach; short-term mental health treatment from psychologists, including individual, group, or family psychotherapy; biofeedback; and medication.

Status: All clinical services ended June 1987, and 1,449 Medicaid recipients had received the intervention. Data are being analyzed for evaluation of the project. The final report is expected in December 1990.

Geriatric Continence Evaluation Contract

Project No.: 500-87-0028
Period: October 1987-December 1989
Funding: $ 125,000
Award: Technical Support: Evaluation of Demonstrations
(See page 76)
Contractor: Mathematica Policy Research, Inc.
P.O. Box 2393
Princeton, N.J. 08543-2393
Project Officer: Nancy A. Miller
Division of Long-Term Care Experimentation

Description: The contractor, through the subcontractor SysteMetrics, Inc., is evaluating the effectiveness of the Geriatric Continence Research Project as a means of determining the relative value of experimental approaches to geriatric incontinence compared with traditional methods of treatment and care for individuals with this distressing and difficult patient-care problem. The purpose of the evaluation is to determine the cost effectiveness of successful assessment and treatment methods being tested and to assess the applicability of the methods. Policy implications for the use of cost-effective assessment and treatments are to be presented in the context of current reimbursement criteria for incontinent patients. Additionally, as part of this evaluation, SysteMetrics is conducting a more general facility-level analysis designed to examine relationships among the percentages of patients who are incontinent, the percentage not toileted or needing assistance in toileting, and other facility or resident characteristics of Medicare- and Medicaid-certified nursing homes.

Status: Final reports have been received and are being reviewed.

Evaluation of the Alcoholism Service Demonstration

Project No.: 500-89-0066
Period: September 1989-December 1990
Funding: $ 149,949
Award: Contract
Contractor: MayaTech Corporation
1398 Lamberton Drive
Silver Spring, Md. 20902
Project Officer: Edward T. Hutton
Division of Health Systems and Special Studies

Description: Under this project, the contractor will produce a final report that addresses the effectiveness of the demonstration that expanded Medicare and/or Medicaid coverage to include freestanding alcoholism treatment centers. The contractor will examine the impact of the demonstration on the use and cost of services. The project is supported by funds from the National Institute on Alcohol Abuse and Alcoholism, Public Health Service, and the Health Care Financing Administration.

Status: The computerized data files developed by the previous evaluation contractor, Lawrence Johnson Associates, Inc., have been reviewed and documented. Tables for the final report have been developed. The report is expected in December 1990.

Small Business Innovation Research

Diagnosis-Related-Group-Specific Resource Management Software for Hospitals

Project No.: 500-88-0036
Period: June 1988-June 1991
Funding: $ 117,592
Award: Contract
Contractor: John Rafferty and Associates
6408 West College Drive
Phoenix, Ariz. 85033
Project Officer: Sydney P. Galloway
Office of Operations Support
Mandate: Small Business Innovation Development Act of 1982
(Public Law 97-219; reauthorized September 1988)

Description: The aim of this project is to develop a software package for predicting and evaluating hospital resource use and needs on a diagnosis-related-group basis.

Status: This project has completed the design phase, and the software package is approximately 50 percent complete. Because the Small Business Innovation Research program sponsors the development of commercially viable products, it carefully protects the developer's intellectual property. Any detailed information on this project and the product must be obtained from the contractor.

Automated Monitoring for Health Maintenance Organization Quality Assessment

Project No.: 500-87-0023
Period: June 1987-June 1990
Funding: $ 124,054
Award: Contract
Contractor: Schaller Associates, Inc.
3200 North Central Avenue, Suite 680
Phoenix, Ariz. 85012
Project Officer: Sydney P. Galloway
Office of Operations Support
Mandate: Small Business Innovation Development Act of 1982
(Public Law 97-219; reauthorized September 1988)

Description: This project developed an automated quality monitoring program for health maintenance organizations (HMOs). It is designed for use by individuals with little or no prior computer experience in a microcomputer environment.

Status: The product development stage (Phase II) of the project was completed in June 1990. The end product is a software package entitled QA MONITOR which produces monthly reports describing clinical practice patterns and trends in the HMO generally and for individual physicians. It also reports on conditions and events that suggest possible problems requiring followup. The program will flag exceptions to previously set norms when so directed by the user. Users can also identify specific diagnoses and procedures that are to be reported. Followup reports can be prepared by searching the data for a combination of patient characteristics, primary and secondary diagnoses, procedures, and individual physician or specialty. The QA MONITOR package includes an automated patient complaint system which is based on an abstract of the complaint. It allows statistical sampling of the data bases. It provides medical audit support through menu-driven procedures for each stage of the audit, printing of customized audit worksheets, entry and storage of medical audit data, and automatic statistical analyses of these data. Because the Small Business Innovation Research program sponsors the development of commercially viable products, it carefully protects the developer's intellectual property. Any detailed information on this project and the product must be obtained from the contractor.

Automated Monitoring for Nursing Home Quality Assessment

Project No.: 500-88-0041
Period: June 1988-December 1991
Funding: $ 121,105
Award: Contract
Contractor: Schaller Associates, Inc.
3200 North Central Avenue, Suite 680
Phoenix, Ariz. 85012
Project Officer: Sydney P. Galloway
Office of Operations Support
Mandate: Small Business Innovation Development Act of 1982
(Public Law 97-219; reauthorized September 1988)

Description: This project is developing an automated quality of care monitoring program for nursing home administrators. The software program will generate reports on profiles of care and will note exceptions to norms. It will be usable by nursing and support staff and will be portable to multiple sites.

Status: This project is still in the product development stage and is approximately 50 percent complete. Because the Small Business Innovation Research program sponsors the development of commercially viable products, it carefully protects the developer's intellectual property. Any detailed information on this project and the product must be obtained from the contractor.

Acquired Immunodeficiency Syndrome Comprehensive Monitoring System Pilot Project

Project No.: 500-88-0040
Period: June 1988-June 1991
Funding: $ 125,846
Award: Contract

Contractor: Research Consultants
1236 South Masselin Avenue
Los Angeles, Calif. 90019
Project Officer: Sydney P. Galloway
Office of Operations Support
Mandate: Small Business Innovation Development Act of 1982
(Public Law 97-219; reauthorized September 1988)

Description: This project has four objectives:

- To identify the service components and the source of payment for acquired immunodeficiency syndrome (AIDS) and AIDS-related complex patients who receive care in alternative settings (apart from traditional institutional settings).
- To identify the services that are requested but not available in alternative care programs.
- To develop standard protocols for collecting units of service use and cost data in AIDS alternative care settings.
- To develop a microcomputer-based system for monitoring and managing costs for AIDS patients in alternative settings.

Status: This project is still in the product development stage. Because the Small Business Innovation Research program sponsors the development of commercially viable products, it carefully protects the developer's intellectual property. Any detailed information on this project and the product must be obtained from the contractor.

Development of an Acquired Immunodeficiency Syndrome Medicaid Monitoring System

Project No.: 500-89-0027
Period: June 1989-February 1990
Funding: $ 34,069 (Phase I)
Award: Contract
Contractor: Laguna Research Associates
1803 Laguna Street
San Francisco, Calif. 94115
Project Officer: Sydney P. Galloway
Office of Operations Support
Mandate: Small Business Innovation Development Act of 1982
(Public Law 97-219; reauthorized September 1988)

Description: This project tested the general feasibility of designing a system to monitor and analyze Medicaid program data on acquired immunodeficiency syndrome (AIDS) resource use and cost. AIDS Medicaid service use can be identified in programmatic files through diagnostic codes or other means and in the data assembled for monitoring and analysis.

Status: Phase I (basic design) was completed; however, Phase II (product development) was not funded. Because the Small Business Innovation Research program sponsors the development of commercially viable products, it carefully protects the developer's intellectual property. Any detailed information on this project and the product must be obtained from the contractor.

A Microcomputer-Based Information System to Monitor Social and Subacute Services for Persons with Acquired Immunodeficiency Syndrome

Project No.: 500-89-0029
Period: June 1989-February 1990
Funding: $ 24,998 (Phase I)
Award: Contract
Contractor: Berkeley Planning Associates
440 Grand Avenue, Suite 500
Berkeley, Calif. 94610-5085
Project Officer: Sydney P. Galloway
Office of Operations Support
Mandate: Small Business Innovation Development Act of 1982
(Public Law 97-219; reauthorized September 1988)

Description: This project evaluated the feasibility of developing a basic microcomputer-based information system for local agencies. This system would allow local agencies to monitor client-specific community-based social and subacute care services and costs for persons with acquired immunodeficiency syndrome.

Status: Phase I (basic design) was completed. The contractor did not seek Phase II (product development) support. Because the Small Business Innovation Research program sponsors the development of commercially viable products, it carefully protects the developer's intellectual property. Any detailed information on this project and the product must be obtained from the contractor.

Utilization Management Techniques for Physicians' Services and Non-Physician Ambulatory Services

Project No.: 500-89-0030
Period: June 1989-February 1990
Funding: $ 24,851 (Phase I)
Award: Contract
Contractor: Center for Health Policy Studies
6310 Steven's Forest Road, Suite 100
Columbia, Md. 21046
Project Officer: Sydney P. Galloway
Office of Operations Support
Mandate: Small Business Innovation Development Act of 1982
(Public Law 97-219; reauthorized September 1988)

Description: This project studied the feasibility of developing a practical guidebook that would be used in identifying and assessing the performance of private sector programs that purport to monitor and reduce excess utilization of physician and ambulatory services. The project's focus was on programs that are particularly suited to Medicare and its utilization experience.

Status: Phase I (basic design) was completed; however, Phase II (product development) was not funded. Because the Small Business Innovation Research program sponsors the development of commercially viable products, it carefully protects the developer's intellectual property. Any detailed information on this project and the product must be obtained from the contractor.

Improving the Quality of Medical Care Documentation Using Voice-Activated Word Processors

Project No.: 500-90-0021
Period: June 1990-December 1990
Funding: $ 34,717 (Phase I)
Award: Contract
Contractor: Birch and Davis Associates
8905 Fairview Road
Silver Spring, Md. 20910
Project Officer: Sydney P. Galloway
Office of Operations Support
Mandate: Small Business Innovation Development Act of 1982
(Public Law 97-219; reauthorized September 1988)

Description: This project will examine the acceptance by physicians of using a voice-activated word processor to document medical records data. In Phase I, the contractor will identify and recruit two or three emergency room physician groups and obtain the cooperation of the hospitals in which they currently practice. The contractor will also study the procedures in each of the candidate emergency rooms.

Status: The project is in the early developmental stage. Because the Small Business Innovation Research program sponsors the development of commercially viable products, it carefully protects the developer's intellectual property. Any detailed information on this project and the product must be obtained from the contractor.

Development of New Automatic Interactions Detection Software

Project No.: 500-90-0022
Period: June 1990-June 1992
Funding: $ 25,839 (Phase I)
$ 73,870 (Phase II)
Award: Contract
Contractor: Austin Data Management Associates
P.O. Box 4358
Austin, Tex. 78765
Project Officer: Sydney P. Galloway
Office of Operations Support
Mandate: Small Business Innovation Development Act of 1982
(Public Law 97-219; reauthorized September 1988)

Description: This project is developing a new computer software package to perform automatic interactions detection (AID). AID was used in the development of the Medicare hospital payment system based on diagnosis-related groups. AID is also being used to develop case-mix classification systems. The major improvement over existing AID software is the shift of the AID capability from a mainframe to a personal computer format. This move, by itself, will dramatically improve the usability of the AID package. The software product will incorporate statistical methods developed in the last 10 years which will further improve the ability of a user (who is not a programmer) to operate AID.

Status: Phase I (basic design) was completed under contract number 500-89-0031. This contract is for Phase II (product development). Because the Small Business Innovation Research program sponsors the development of commercially viable products, it carefully protects the developer's intellectual property. Any detailed information on this project and the product must be obtained from the contractor.

An Efficient, Effective Automated Care Plan Tool

Project No.: 500-89-0032
Period: June 1989-December 1989
Funding: $ 35,000 (Phase I)
Award: Contract
Contractor: HealthLink Systems, Inc.
103 East Washington Street
Syracuse, N.Y. 13202
Project Officer: Sydney P. Galloway
Office of Operations Support
Mandate: Small Business Innovation Development Act of 1982
(Public Law 97-219; reauthorized September 1988)

Description: This project developed a microcomputer-based model which generates a nursing plan of care directly from the patient's responses to illness. The entry of subsequent nursing assessments for the patient serves as the evaluation of the effectiveness of nursing interventions.

Status: Phase I (basic design) was completed; however, Phase II (product development) was not funded. Because the Small Business Innovation Research program sponsors the development of commercially viable products, it carefully protects the developer's intellectual property. Any detailed information on this project and the product must be obtained from the contractor.

Hypermedia-Based Medicare Beneficiary Information Support System

Project No.: 500-90-0020
Period: June 1990-September 1991
Funding: $ 30,385 (Phase I)
Award: Contract

Contractor: Technovation Training, Inc.
3458 Brantford Road
Toledo, Ohio 43606-2416
Project Officer: Sydney P. Galloway
Office of Operations Support
Mandate: Small Business Innovation Development Act of 1982
(Public Law 97-219; reauthorized September 1988)

Description: The purpose of this project is to investigate the feasibility of developing a hypermedia-based information system for Medicare beneficiaries.

Status: The project is in the early developmental stage. Because the Small Business Innovation Research program sponsors the development of commercially viable products, it carefully protects the developer's intellectual property. Any detailed information on this project and the product must be obtained from the contractor.

Development of a Tool for Assessing Hospital Bed Needs in Rural Communities

Project No.: 500-89-0028
Period: June 1989-February 1990
Funding: $ 34,289 (Phase I)
Award: Contract
Contractor: Laguna Research Associates
1803 Laguna Street
San Francisco, Calif. 94115
Project Officer: Sydney P. Galloway
Office of Operations Support
Mandate: Small Business Innovation Development Act of 1982
(Public Law 97-219; reauthorized September 1988)

Description: This project developed an empirical model of hospital utilization for use by rural communities to assess bed needs in a community, thereby to assist rural communities in long-range planning. The model relates hospital utilization to the socioeconomic and demographic characteristics of the population, the availability of substitute services, and other factors felt to have an impact on demand and supply of services. An empirical model of rural hospital costs per patient day was also developed. This model incorporates fluctuations in occupancy rates and volume of selected services on the cost per day of care.

Status: Phase I (basic design) was completed; however, Phase II (product development) was not funded. Because the Small Business Innovation Research program sponsors the development of commercially viable products, it carefully protects the developer's intellectual property. Any detailed information on this project and the product must be obtained from the contractor.

A Planning Process for Changing Rural Health Care Delivery Systems

Project No.: 500-90-0023
Period: June 1990-June 1992
Funding: $ 37,359 (Phase I)
$ 110,882 (Phase II)
Award: Contract
Contractor: Public Health Resource Group
P.O. Box 5068, Station A
Portland, Maine 04101
Project Officer: Sydney P. Galloway
Office of Operations Support
Mandate: Small Business Innovation Development Act of 1982
(Public Law 97-219; reauthorized September 1988)

Description: This project is developing a written set of planning protocols, statistical algorithms, and computer software to assist rural hospitals and their communities in evaluating the efficacy and financial condition of the hospitals and the health care delivery system.

Status: Phase I (basic design) was completed under contract number 500-89-0033. The project is in Phase II (product development and testing). Because the Small Business Innovation Research program sponsors the development of commercially viable products, it carefully protects the developer's intellectual property. Any detailed information on this project and the product must be obtained from the contractor.

Research Centers and Evaluation Support

The RAND/University of California, Los Angeles/ Harvard Health Care Financing Policy Research Center

Project No.: 99-C-98489/9
Period: March 1984-July 1994
Funding: $ 12,095,382 (Total funds awarded for projects from March 1984 through September 1990)
Award: Cooperative Agreement
Awardee: The RAND Corporation
1700 Main Street
Santa Monica, Calif. 90406
Project Coordinator: Michael J. Baier
Office of Operations Support

Description: The primary responsibility of the RAND/University of California, Los Angeles (UCLA)/ Harvard Health Care Financing Policy Research Center is to provide expert consultation in planning, implementing, and evaluating research and demonstrations studies related to the ongoing functioning of the Medicare and Medicaid programs. The RAND Corporation is the principal partner

organization for the Research Center. The UCLA School of Public Health and Harvard University's Division of Health Policy Research and Education have affiliated with RAND as subcontractors under this cooperative agreement. The Center has provided support and expertise on priority initiatives in all major areas of program activity.

Status: Each year under this cooperative agreement, the RAND/UCLA/Harvard Research Center and the Health Care Financing Administration jointly develop an agenda of specific topics and projects. The Center is currently in its seventh year of operation. All of the projects conducted from October 1989 through September 1990 under this cooperative agreement are described in the appropriate sections of this *Status Report*. The following is a list of the project titles:

Quality of Care

- Interpreting Hospital Mortality Data: How Much Can Patient Severity and Quality of Care Explain?
- Evaluating Quality of Care for Surgical Patients: Using Diagnosis-Related Group and Quality of Care Data for Research on Hip Patients.

Physician and Ambulatory Care Payment Systems

- Multiple Hospital Visits.
- Assistants at Surgery: Variation in Use.
- Medical Visit Coding.
- Concurrent Care During Surgical Admissions.
- Physician Practice Patterns.
- Policy Implications of Alternative Volume Performance Standards.
- Dialysis Codes and Billing Patterns.
- Analysis of Group-Based Methods for Medicare Fee Schedule Refinement.
- Medicare Physician Experience Differentials.
- Global Fees.
- Assistants at Surgery: Geographic Variation.
- Designing a Study of Components of the Dialysis Monthly Capitation Payment.
- Effectiveness of Ambulatory Cardiac Monitoring.

Capitated Payment Systems

- Evaluation of the Prepaid Managed Health Care Demonstration.
- Beneficiary Incentives to Choose Alternative Health Plans.

Hospital Payment

- Measuring Components of Case-Mix Change.
- Do Low-Income Patients Have Costlier Hospital Stays?
- Simulations of Alternative Prospective Payment System Outlier Payment Options.
- Assessment of Recent Changes in Prospective Payment System Outlier Policy.
- Interactions Between Outlier Payment Policy and Methods of Diagnosis-Related Groups Recalibration and Classification.
- Diagnosis-Related Group Outlier Payment Effect on Quality of Care.
- Determinants of Hospital Costs and Their Growth.
- Indirect Medical Education and Small Teaching Hospitals.
- Health Care for Poor and Rural Hospital Patients.

Program Efficiencies, Analyses, and Refinements

- Description and Analysis of State Medicaid Drug Benefits.

Health Care Prevention and Access

- Relationships Between Household Income, Health Insurance Status, and Access to Medical Care.
- Access to Kidney Transplantation: An Examination of the Decision to Transplant.
- Damaged Children: Implications for the Medicaid System.

Subacute and Long-Term Care

- Medicaid Home and Community-Based Waiver Programs for Acquired Immunodeficiency Syndrome Patients.
- The Effects of the Human Immunodeficiency Virus Epidemic on the Uses of Medicaid by Women and Children.
- Evaluation of Massachusetts Case-Managed Medical Care for Nursing Home Patients.
- Changes in Post-Hospital Care Utilization Among Medicare Patients.

Brandeis University Health Policy Research Consortium

Project No.: 99-C-98526/1
Period: March 1984-July 1994
Funding: $ 10,311,651 (Total funds awarded for projects from March 1984 through September 1990)
Award: Cooperative Agreement
Awardee: Brandeis University
Heller Graduate School
415 South Street
Waltham, Mass. 02254
Project Coordinator: Michael J. Baier
Office of Operations Support

Description: The Brandeis University Health Policy Research Consortium (HPRC) includes the Boston University School of Medicine; the Center for Health Economics Research, Needham, Massachusetts; and The Urban Institute Health Policy Center, Washington, D.C. These institutions provide expertise in the areas of health services delivery issues, physician payment alternatives, and long-term care policy options, as well as microsimulation and data processing capabilities.

Status: Each year under this cooperative agreement, the Brandeis HPRC and the Health Care Financing Administration jointly develop an agenda of specific topics and projects. The Center is currently in its seventh year of operation. All of the projects conducted from October 1989 through September 1990 under this cooperative agreement are described in the appropriate sections of this *Status Report*. The following is a list of the project titles:

Quality of Care

- Evaluating Quality of Care for Hospitalized Patients.
- Clinical Homogeneity of Severity of Illness Measures.
- Development of Ambulatory Surgery Quality of Care Measures and Monitoring Strategy.

Physician and Ambulatory Care Payment Systems

- Analysis of Medical Visit Data.
- Analysis of Group-Specific Volume Performance Standards.
- New Patient Visit Codes.
- Concurrent Care During Surgery.
- Beneficiary Use of Services Over Time.
- Analysis of 1988 Physicians' Practice Costs Survey Equipment Supplement.
- Global Fees for Surgery.
- Surgical Global Fee Packages.
- Multiple Physicians Furnishing Surgery.
- Place of Service Payment Differentials.
- Geographic Variation in Inpatient Physician Consultation Rates.
- Urban and Rural Differences in Physician Practices.
- Analysis of Malpractice Premium Data.
- Anesthesia Payments.
- Economies in Physician Practice.
- Comparison of Medicare Fees to Private Payers.
- Individual Practice Association Physician Relationships.
- Physician Income Over Time.
- Exploring Hospital Outpatient Department Physician Services.

Capitated Payment Systems

- Geographic Variation and Long-Run Capitation Ratesetting for Medicare Expenditures.
- Examination of Alternatives to the Adjusted Average Per Capita Cost Geographic Factor.
- Impacts of the Working Aged on Medicare Expenditure Rates.

Hospital Payment

- Graduate Medical Education Payment.
- Uncompensated Care Tables: 1984 American Hospital Association and Urban Institute Survey.
- Monitoring Hospital Costs and Productivity.
- Monitoring Hospital Closures, Mergers, Openings, and Changes in Ownership.
- The Potential Use of Hospital Choice Models in Analyzing Essential Access Community Hospital and Rural Primary Care Hospital Designations.
- Analysis of the Tax Equity and Fiscal Responsibility Act for Reimbursement of Excluded Hospitals Under the Prospective Payment System.

Program Efficiencies, Analyses, and Refinements

- Medicare Financing Simulation Model.

Health Care Prevention and Access

- Analyzing Durations of Spells Without Health Insurance: How Many Types of People Have Chronic Versus Short-Term Spells?
- Extending Medicaid Coverage of Substance Abuse Treatment to Eligible Pregnant Women: Assessment of Issues and Costs.

Subacute and Long-Term Care

- Capitation Reimbursement for Frail Elderly.
- Feasibility Analysis for Pathways to Long-Term Care Project.
- Cohort Analysis of Disabled Elderly.
- Study of Alternative Out-of-Home Services for Respite Care.
- Financial Impact to Beneficiaries of Nursing Home Care.
- Activities of Daily Living Measurements as Determinants of Eligibility.
- Impacts of Long-Term Care Supply Differences on Medicare Service Use.
- Urban/Rural Variation in Home Health Agency and Nursing Home Services.
- Determinants of Home Care Costs.

Project HOPE Health Policy Research Center

Project No.: 99-C-99168/3
Period: January 1988-July 1991
Funding: $ 2,541,587 (Total funds awarded for projects from January 1988 through September 1990)
Award: Cooperative Agreement
Awardee: The People-To-People Health Foundation, Inc.
Two Wisconsin Circle, Suite 500
Chevy Chase, Md. 20815
Project Coordinator: Leslie Mangels
Office of Operations Support

Description: On November 19, 1987, Project HOPE's (Health Opportunity for People Everywhere) application as a research center for the Health Care Financing Administration (HCFA) was approved originally for 1 year, January 1 through December 31, 1988. This period was subsequently extended through July 31, 1989. The cooperative agreement is currently in effect through July 31, 1991. Under this cooperative agreement, the three major subcontractors to Project HOPE are the Vanderbilt University Health Policy Center; Medical College of Virginia Williamson Institute; and Social and Scientific Systems, Inc.

Status: Each year under this cooperative agreement, Project HOPE Health Policy Research Center and HCFA jointly develop an agenda of specific topics and projects. The Center is currently in its seventh year of operation. All of the projects conducted from October 1989 through September 1990 under this cooperative agreement are described in the appropriate sections of this *Status Report*. The following is a list of the project titles:

Quality of Care

- Option Paper on Collection of Health Status Information on Consecutive Cohorts of Medicare Beneficiaries.

Physician and Ambulatory Care Payment Systems

- Billing Patterns for Critical-Care Physician Services.
- Considerations of Inappropriate Utilization and Access Adjustments of Medicare Volume Performance Standards.
- Survey of State Regulation of Physician Office Medical Equipment.
- Statistical Properties of Physician Practice Cost Surveys.
- Analysis of Technological Changes in Physician Services.
- Bundling Test Interpretation Fees into Medical Visit Fees.
- Physician Payment Differentials by Board Certification Status.

Capitated Payment Systems

- Working Aged Beneficiaries: Program Impacts and Implications for the Adjusted Average Per Capita Cost.
- Developing the Design for a Demonstration of Medicare Payment for Community Nursing Organizations.

Hospital Payment

- Development of Patient Origin and Transfer Data.
- Examination of Alternative Approaches for Graduate Medical Education Payment Through Medicare.
- Impact of the Growth in Ambulatory Procedures and Diagnostic Services on Inpatient Care.
- Hospital Transfer and Referral Patterns.

Program Efficiencies, Analyses, and Refinements

- Use of Market Force Dynamics to Set Medicare Fee Schedules.
- Providing Technical Assistance to the Advisory Council on Social Security.
- Pricing and Coverage Decisions for New and Existing Technologies.
- An Analysis of Medicare Expenditures for Ambulance Services.

Subacute and Long-Term Care

- High-Cost Hospice Care.

University of Minnesota Research Center

Project No.:	99-C-99169/5
Period:	January 1988-July 1991
Funding:	$ 2,853,615 (Total funds awarded for projects from January 1988 through September 1990)
Award:	Cooperative Agreement
Awardee:	University of Minnesota 1919 University Avenue St. Paul, Minn. 55104
Project Coordinator:	Michael J. Baier Office of Operations Support

Description: On November 19, 1987, the University of Minnesota's application as a research center for the Health Care Financing Administration (HCFA) was approved for 1 year, January 1 through December 31, 1988. This period was subsequently extended through July 31, 1989. The cooperative agreement is currently in effect through July 31, 1991. The University of Pennsylvania and Mathematica Policy Research, Inc., are two major subcontractors affiliated with the University of Minnesota under this cooperative agreement.

Status: Each year under this cooperative agreement, the University of Minnesota Research Center and HCFA jointly develop an agenda of specific topics and projects. The center is currently in its seventh year of operation. All of the projects conducted from October 1989 through September 1990 under this cooperative agreement are described in the appropriate sections of this *Status Report*. The following is a list of the project titles:

Quality of Care

- Outcome Measures for Assessment of Hospital Care.
- Psychoactive Drug Use Among Nursing Home Elderly.

Physician and Ambulatory Care Payment Systems

- Allocating Practice Costs: Conceptual Issues.
- Diagnostic Tests—The Technical Component: Provider Volume and Ownership Patterns.
- Diagnostic Testing: Policy Analysis of Pricing Options.
- Economies in Furnishing Physician Services.
- Physician Preferred Provider Organization Demonstration.
- Determinants of Cost of Care: The Influence of Physician Style Versus Patient Characteristics.
- Ambulatory Cardiac Monitoring.
- Computer-Assisted Test Interpretation.

Capitated Payment Systems

- Open-Ended Health Maintenance Organizations and Medicare.
- Alternatives to Fee For Service as a Base for Health Maintenance Organization Premium Setting.

Hospital Payment

- Medicare Hospital Payment Policies: Impact on the Nursing Shortage.
- Medical Assistance Facility Certification Criteria.

Program Efficiencies, Analyses, and Refinements

- Volume-Adjusted Payment for Clinical Laboratory Services.
- Laboratory Industry Technology and Productivity Changes.
- Design of Interventions to Reduce Drug-Related Adverse Events Among Community-Resident, Elderly Medicaid and Medicare Patients.
- An Assessment of Private Sector Prescription Drug Utilization Review Programs.
- Study of Inappropriate Use of Medications by Medicare Beneficiaries.

Health Care Prevention and Access

- Feasibility Study to Examine the Cost Effectiveness of Medicaid Expansions.
- Medicaid: Neonatal Intensive Care Unit Costs.

Subacute and Long-Term Care

- Program for All-Inclusive Care for the Elderly (On Lok) Case Study.
- Evaluation of the Suitability of Nonrandom Designs for the Program for All-Inclusive Care of the Elderly.
- Bundling of Acute and Post-Acute Care Service.
- Implementing Federal Regulations in Nursing Homes: A Conceptual Paper.
- Goals and Strategies for Financing Long-Term Care.
- Analysis of Costs, Patient Characteristics, Access, and Service Use in Urban/Rural Home Health Agencies.

Technical Support: Evaluation of Demonstrations

Project Nos.: 500-87-0028; 500-87-0029; 500-87-0030
Period: June 1987-June 1991
Funding: $ 9,562,894
Award: Contracts
Contractors: Mathematica Policy Research
Box 2393
Princeton, N.J. 08543

Lewin/ICF
1090 Vermont Avenue, NW., Suite 700
Washington, D.C. 20005

Abt Associates, Inc.
55 Wheeler Street
Cambridge, Mass. 02138
Project Coordinator: Tony F. Hausner
Division of Long-Term Care Experimentation

Description: The Health Care Financing Administration (HCFA) has awarded indefinite quantity contracts to Mathematica Policy Research, Lewin/ICF, and Abt Associates, Inc. These contracts are designed to assist HCFA in evaluating demonstrations through the use of small-scale tasks that can be awarded within short timeframes. The three firms will compete for each task.

Status: All of the currently awarded projects are described in the appropriate sections of this *Status Report*. The following is a list of the project titles:

Quality of Care

- New York State Quality Assurance System Evaluation.

Physician and Ambulatory Care Payment Systems

- Evaluation of the Physician Preferred Provider Organization Demonstration.
- Medicare Cataract Surgery Alternate Payment Demonstration.
- Medicare Participating Heart Bypass Center Demonstration.
- Evaluation of New York State Products of Ambulatory Care Demonstration Project.

Capitated Payment Systems

- Evaluation of Diagnostic Cost Group Pilot Demonstration.
- Evaluation of the Municipal Health Services Program.
- Evaluation of the Florida Alternative Health Plan Project.

Hospital Payment

- Rural Health Transition Grant Evaluation.
- Evaluation of the Ventilator-Dependent Unit Demonstration.

Program Efficiencies, Analyses, and Refinements

- Geriatric Continence Evaluation Contract.

Health Care Prevention and Access

- Cross-Cutting Evaluation of Medicare Prevention Demonstrations.
- Implementation of the Cost-Effectiveness Study of Medicare Coverage for Influenza Vaccine.
- Evaluation of the Omnibus Budget Reconciliation Act of 1987 Medicare Payment for Therapeutic Shoes for Individuals with Severe Diabetic Foot Disease Demonstration.

Subacute and Long-Term Care

- Evaluation Design for Medicare Alzheimer's Disease Demonstration.
- Prior and Concurrent Authorization Demonstrations.

Drug Utilization and Expenditure Studies

The Utilization of Pharmaceuticals by the Elderly Receiving Drug Benefits Under State-Sponsored Programs

Project No.: 18-C-99191/4
Period: September 1988-December 1989
Funding: $ 91,315
Award: Cooperative Agreement
Awardee: University of South Carolina
College of Pharmacy
Columbia, S.C. 29208
Project Officer: C. McKeen Cowles
Division of Reimbursement and Economic Studies

Description: This project will be used to analyze drug utilization, charges, and expenditures of Pennsylvania's elderly participating in the Pennsylvania Medicaid program as well as those enrolled in the Pharmaceutical Assistance Contract for the Elderly, two mutually exclusive programs. Using 1987-88 drug claim data from the two programs, researchers will:

- Determine what percentage of the elderly population will reach a predefined deductible.
- Examine prescription use and expenditures once the deductible is met.
- Study the demographic relationships of the elderly population on prescription utilization and expenditures.
- Estimate the elderly's prescription usage and expenditures by therapeutic categories.

Status: The draft final report entitled "Utilization and Expenditures in a State-Sponsored Drug Benefit Program for the Elderly" has been received in the Office of Research and Demonstrations and is being reviewed.

Description and Analysis of State Medicaid Drug Benefits

Project No.: 99-C-98489/9
Period: August 1990-February 1992
Funding: $ 147,705
Award: Cooperative Agreement
Awardee: The RAND Policy Research Center
(See page 72)
Project Officer: M. Beth Benedict
Division of Program Studies

Description: The overall goals of this project are to summarize existing knowledge on the economic and quality of care effects of alternative cost-containment methodologies utilized in the Medicaid program (e.g., drug formularies, drug utilization reviews, pricing determination mechanisms, and patient cost sharing); to define high-priority information needs in these areas; and to propose research methodologies and topics to provide needed information on the impact of specific policies.

Status: This project is in the early developmental stage.

An Analysis of the Impact of Prescription Drug Coverage for Aged Medicare Beneficiaries

Project No.: 17-C-99392/3
Period: August 1989-August 1992
Funding: $ 889,741
Award: Cooperative Agreement
Awardee: Gerontology Center
College of Health and
Human Development
The Pennsylvania State University
210 Henderson Building South
University Park, Pa. 16802
Project Officer: Feather Ann Davis
Division of Program Studies

Description: The purpose of the cooperative agreement is to conduct four coordinated studies of prescription drug use among the elderly, using data from the Pennsylvania Department on Aging's Pharmaceutical Assistance Contract for the Elderly (PACE) data base linked with Medicare Parts A and B claims data and eligibility and death information. The studies include longitudinal analysis of PACE cohorts, demand characteristics of established insureds, prescription drug use in the last year of life, and drug-risk analysis.

Status: All of the analyses are under way; linkage with the Medicare Parts A and B data is in progress. Risk analysis of H_2 blocker criteria developed by the University of Maryland under cooperative agreement number 17-C-99406 is being conducted. The four other criteria sets will be programmed when complete. A paper entitled "Depramic Aspects of Drug Use in an Elderly Population" has been prepared. Initial analyses of drug use in the last year of life have been conducted.

Analyses of Patterns of Prescription and Over-the-Counter Drug Use Among the Elderly: Collaborative and Site-Specific Descriptive and Multivariate Analyses of Data Collected by the Established Populations for Epidemiologic Studies of the Elderly Contracts

Project No.: 1 Y03 AG-9-0130
Period: June 1990-June 1991
Funding: $ 300,000
Award: Interagency Transfer
Awardee: National Institutes of Health
National Institute of Aging
Bethesda, Md. 20892
Project Officer: Steven L. Hass
Division of Beneficiary Studies

Description: This project will supplement the National Institute of Aging's analysis of prescription drug and over-the-counter drug data that have been collected by The University of Iowa and Duke, Harvard, and Yale Universities, the four contractors included in the Established Populations for the Epidemiologic Studies of the Elderly (EPESE).

Status: Analysis plans from the four EPESE contractors have been approved and are currently under way. Topic areas include drug usage patterns and adverse drug reactions among the elderly.

Design of Interventions to Reduce Drug-Related Adverse Events Among Community-Resident, Elderly Medicaid and Medicare Patients

Project No.: 99-C-99169/5
Period: August 1990-July 1991
Funding: $ 59,692
Award: Cooperative Agreement
Awardee: University of Minnesota Research Center
(See page 75)
Project Officer: Ruth B. Pickard
Division of Health Systems and
Special Studies

Description: The knowledge base on the causes of drug-related adverse events is now substantial enough to warrant a research program on the cost effectiveness of interventions to reduce the incidence of such events. Under this project, the University of Minnesota will conduct a literature review to frame hypotheses about what types of interventions are most likely to be cost effective and to consider designs to test those hypotheses. The project will assess the costs of acute health care services covered by public programs, relative to the costs of implementing an intervention. The subsequent report will compare and contrast various interventions, recommending one or more for further study.

Status: This project is in the early developmental stage.

An Assessment of Private Sector Prescription Drug Utilization Review Programs

Project No.: 99-C-99169/5
Period: September 1989-November 1990
Funding: $ 100,726
Award: Cooperative Agreement
Awardee: University of Minnesota Research Center
(See page 75)
Project Officer: Ruth B. Pickard
Division of Health Systems and Special Studies

Description: The purpose of this study is to identify and classify alternate approaches to drug utilization review (DUR) in private sector health insurance plans (including health maintenance organizations) and to evaluate the effectiveness of these programs. This project evaluated the outcomes, process, and structure of existing DUR programs seeking to identify and describe innovative, cost-effective, and replicable approaches to DUR that apply to the elderly. Outcomes of interest include maximization of benefit from drug therapy, minimization of risk from drug incompatibilities or inappropriate use of drugs, and minimization of cost of drug therapy regimes.

Status: Data collection has been completed. Fifteen firms were surveyed by telephone, and site visits were conducted with 7 DUR programs. All of the programs depend heavily on data generated by prescription drug claims processing systems. Both retrospective and concurrent review programs were analyzed. Either process was found to be inexpensive, with those interventions designed to change prescriber practice being the most expensive aspect. Only a limited amount of formal evaluation of the benefits and cost effectiveness of DUR was found to occur among the studied programs. Most programs appeared to take direct action to change the problematic practices of pharmacists but seemed reluctant to take an aggressive approach with physician practices. A final report on the findings is expected in December 1990.

Model for Developing Methodological Strategies for Outpatient Drug Use Review Under the Medicare Catastrophic Coverage Act of 1988

Project No.: 17-C-99406/3
Period: August 1989-February 1991
Funding: $ 411,000
Award: Cooperative Agreement
Awardee: Center on Drugs and Public Policy
Graduate School, Baltimore
The University of Maryland
20 North Pine Street
Baltimore, Md. 21201
Project Officer: Feather Ann Davis
Division of Program Studies

Description: The purpose of this cooperative agreement is to design a model for the development of explicit systematic methodological strategies to conduct outpatient drug use reviews.

Status: Five panels of experts have been convened and have drafted drug use review criteria for H_2 blockers, benzodiazapines, nonsteroidal anti-inflammatory drugs, antidepressants and antipsychotics, and digoxin/ace inhibitors/calcium channel blockers.

Research Issues in the Medicare Outpatient Prescription Drug Program

Project No.: HCFA-88-1113
Period: August 1988-December 1989
Funding: $ 24,526
Award: Contract
Contractor: Center on Drugs and Public Policy
Graduate School, Baltimore
The University of Maryland
20 North Pine Street
Baltimore, Md. 21201
Project Officer: Feather Ann Davis
Division of Program Studies

Description: The purpose of this contract is to identify major research issues in the areas of prescription drug utilization and pharmacoepidemiology; prescription drug expenditures, pricing, and financing issues; and therapeutic drug use review.

Status: The contractor has submitted a final report entitled "Research Issues in the Medicare Outpatient Prescription Drug Program" that summarizes the relevant literature, presents the recommended major research priorities, and specifies data elements necessary for analyses. Table shells for routine reports have been specified. The report will be submitted to the National Technical Information Service.

Impact of Home Intravenous Drug Benefits on Beneficiary Utilization of Services

Project No.: 17-C-99457/4
Period: August 1989-February 1991
Funding: $ 300,000
Award: Cooperative Agreement
Awardee: University of South Carolina
College of Pharmacy
Columbia, S.C. 29208
Project Officer: Steven L. Hass
Division of Beneficiary Studies

Description: The purpose of this project is to study home intravenous (IV) drug use in North Carolina and Florida. Home infusion therapy drugs will be identified, and North Carolina and Florida home IV drug providers will be surveyed to identify the current volume, composition, and source of payment. Provider sites will be visited and patient charts will be reviewed in order to abstract diagnoses, diagnosis-related groups, and patient outcomes.

Status: Providers of home IV infusion therapy in North Carolina and Florida have been identified. Lists of drugs

used in each State have been developed from the records of the providers, and descriptive statistics are being generated. A survey instrument for use in the chart review is being developed.

Estimating the Impact of the Medicare Catastrophic Coverage Act on the Elderly's Prescription Drug Use and Expenditures and Medicare Program Costs

Project No.: 17-C-99423/3
Period: August 1989-April 1991
Funding: $ 167,831
Award: Cooperative Agreement
Awardee: The People-To-People Health Foundation, Inc.
Two Wisconsin Circle, Suite 500
Chevy Chase, Md. 20815
Project Officer: J. Daniel Babish
Division of Beneficiary Studies
Mandate: Medicare Catastrophic Coverage Act of 1988
(Public Law 100-360)

Description: This project was designed to forecast the impact of the Medicare Catastrophic Coverage Act on prescription drug expenditures and Medicare program outlays in 1991 and subsequent years. It was also designed to assess the impact of insurance coverage on prescription drug expenditures; simulate the impact of alternative coinsurance rates; assess out-of-pocket expenditures by income level; and examine the effect of an overall deductible, which takes into account all Medicare expenditures, on out-of-pocket expenses and financing costs. Data from the 1987 National Medical Expenditure Survey are being used as the basis of the forecasts. Estimates are being adjusted by including correction factors for systematic under- or over-reporting of drug expenditures from an independently funded prescription drug validation survey.

Status: All activities except for assessing the impact of insurance coverage on the use of prescription drugs and examining the effect of an overall deductible have been completed. The project has resulted in two publications, "Understanding the cost of a catastrophic drug benefit" (9:3, 88-100) and "Using survey data to estimate prescription drug costs" (9:3, 146-156), both published in the Fall 1990 issue of *Health Affairs*.

Other Studies

Impact of Medicare Catastrophic Coverage Act on Spending and Utilization

Project No.: 17-C-99395/1
Period: August 1989-August 1994
Funding: $ 1,596,230
Award: Cooperative Agreement
Awardee: Center for Health Economics Research
Hillsite Office Building
75 Second Avenue, Suite 100
Needham, Mass. 02194
Project Officer: J. Daniel Babish
Division of Beneficiary Studies
Mandate: Medicare Catastrophic Coverage Act of 1988
(Public Law 100-360)

Description: This project is designed to study changes in Medicare spending and utilization per enrollee over time as catastrophic benefits are phased in. Issues to be studied include:

- Changes in the level and distribution of total Medicare spending for beneficiaries.
- Variations in spending and utilization for beneficiaries across geographic areas.
- Out-of-pocket liability per enrollee over time.
- Profiles of the actual users of catastrophic benefits.
- Treatment of high-cost illnesses over time.
- Beneficiaries in their last year of life.

An 11-State data base of all Medicare claims and eligibility information for the years 1987-92 is being constructed. The States to be studied are Alabama, Arizona, Connecticut, Georgia, Kansas, New Jersey, Oklahoma, Oregon, Pennsylvania, Washington, and Wisconsin.

Status: Files for 1988 have been assembled. The project is focused on assessing variations in spending, utilization, and outcome for 3 conditions and procedures—chronic obstructive pulmonary disease (COPD), acute myocardial infarction (AMI), and inguinal hernia repair. Episode-of-care files for each condition or procedure are being created. Each study has a particular focus. The study on chronic disease will assess COPD because it is a leading cause of death among the elderly. The AMI study will explore the various technologies used to diagnose and treat AMI in the pre- and post-infarction period. The inguinal hernia study will focus on treatment patterns, costs, and outcomes across treatment settings (inpatient versus outpatient). These studies will be completed next year.

Medicare Catastrophic Coverage Act Evaluation: Impacts on Industry

Project No.: 500-89-0064
Period: September 1989-August 1994
Funding: $ 993,199
Award: Contract
Contractor: The Urban Institute
Health Policy Center
2100 M Street, NW.
Washington, D.C. 20037
Project Officer: Feather Ann Davis
Division of Program Studies

Description: The purpose of the contract is to perform a series of research projects all related to the analysis of the benefit changes introduced by the Medicare Catastrophic Coverage Act of 1988 (Public Law 100-360). Categories affected by these benefit changes include hospitals, nursing homes, and home health agencies.

Status: Work on the nursing home analysis is in progress. Work on the hospital and home health analyses will begin by the end of 1990.

Medicare Catastrophic Coverage Act Evaluation: Beneficiary and Program Impacts

Project No.: 500-89-0063
Period: September 1989-August 1994
Funding: $ 2,187,621
Award: Contract
Contractor: Abt Associates, Inc.
55 Wheeler Street
Cambridge, Mass. 02138
Project Officer: Feather Ann Davis
Division of Program Studies

Description: The purpose of the contract is to perform a series of research projects all related to the analysis of the benefit changes introduced by the Medicare Catastrophic Coverage Act (MCCA) of 1988 (Public Law 100-360). Issues to be examined include the effects of the Medicare Part A changes instituted during 1989 and then revoked by Congress, effective 1990; and the effects of the Medicaid expansions, which were not revoked, on pregnant women and children, on dually entitled aged persons, and on community-based spouses of institutionalized Medicaid recipients.

Status: Work on the contract was suspended until November 1990 pending the revision of the contract commensurate with the recision by Congress of the Medicare aspects of the MCCA benefit.

Research on Competitive Forces Driving Medicare Utilization

Project No.: 17-C-98522/9
Period: September 1984-November 1988
Funding: $ 246,495
Award: Cooperative Agreement
Awardee: SRI International
333 Ravenswood Avenue
Menlo Park, Calif. 94025
Project Officer: Judith A. Sangl
Division of Long-Term Care Experimentation

Description: The major objective of this project was to analyze how various factors affect Medicare beneficiaries' utilization of and expenditures for services. These factors included ownership of supplemental health insurance policies, beneficiaries' knowledge of the Medicare program and of the supplemental policies they own, and the extent to which beneficiaries are treated on assignment by physicians. Data sources included a detailed 1982 survey of a random sample of Medicare beneficiaries in California, Florida, Mississippi, New Jersey, Washington, and Wisconsin; copies of the insurance policies owned by beneficiaries in this sample; and complete Medicare utilization records from 1980-82 for this sample.

Status: This project is completed. Two papers were produced. The first, "The Effectiveness of Consumer Choice in the Medicare Supplemental Health Insurance Market," shows that ownership of supplemental insurance is strongly linked to higher levels of income and assets and knowledge of Medicare, and that ownership of effective policies (i.e., those that provide for real supplementation of Medicare through coverage of inpatient and outpatient care for all illnesses) is further related to these higher income and asset levels and to higher educational levels. Ownership of more than one supplemental policy is more likely to occur among those who work or whose spouses work, those with property, and those who are more highly educated, although it is less likely to occur among urban beneficiaries and those who are married. Ownership of only less effective policies is more common among beneficiaries in the older age group and less common among those more highly educated. All races other than white are significantly less likely to own any kind of policy—one policy, two or more policies, effective policies, or less effective policies. The second paper, "The Effect of Private Insurance on Utilization: Evidence from the Medicare Population," indicates that the effect of supplemental insurance coverage on utilization of services is strongest for those in poor or fair perceived health. It is also strongest for the use of services and less so for the level of use by service users. The effect is even more dramatic for those in poor or fair health having a policy with first-dollar coverage. The final report entitled "Competitive Forces Driving Medicare Utilization," accession number PB90-243841, is available from the National Technical Information Service.

Wisconsin Welfare Reform Demonstration

Project No.: 11-C-99154/5
Period: October 1987-September 1990
Award: Cooperative Agreement
Awardee: Wisconsin Department of Health and Social Services
P.O. Box 7850
Madison, Wis. 53702
Project Officers: Bonnie M. Edington and
Debbie C. Van Hoven
Division of Health Systems and Special Studies

Description: Major welfare reform legislation, the Family Support Act (Public Law 100-485), became law in October 1988. This law embodies many of the components of the current welfare reform demonstrations. Under the law, a Medicaid extension up to 12 months would be given to people working their way off welfare as of April 1990. The first 6 months of this extension would be given regardless of income; the remaining 6 months would be contingent upon earnings below 185 percent of the Federal poverty level. Wisconsin implemented its Medicaid extension waiver in February 1989. This demonstration has waivers from the Health Care Financing Administration (HCFA) and the Family Support Administration permitting:

- A "learnfare" requirement that teenage recipients of Aid to Families with Dependent Children (AFDC) be in school.
- A requirement that parents whose youngest child is over 3 months of age register for work or training.
- Major changes in the disregard of earnings, with less being disregarded in the initial 4 months of work and more in the subsequent 8 months.
- A Medicaid extension of 12 months for recipients who lose AFDC eligibility because of earnings, regardless of income increases during the extension period.

Status: Effective October 1, 1989, HCFA approved waivers permitting the State to expand Medicaid eligibility for pregnant women and children to higher income levels under the Healthy Start program. The program targets low-income pregnant women and their children, and eligible participants receive Medicaid-covered services. As of April 1990, Wisconsin implemented its demonstration statewide and received waivers to give the full 12-month Medicaid extension to all recipients who work their way off welfare, regardless of earnings. As of June 1990, 2,073 eligible participants had been enrolled in the program.

New Jersey Welfare Reform: Realizing Economic Achievement (REACH)

Project No.: 18-C-99156/2
Period: October 1987-September 1992
Award: Cooperative Agreement
Awardee: New Jersey Department of Human Services
222 South Warren Street
Trenton, N.J. 08625
Project Officer: Bonnie M. Edington
Division of Health Systems and Special Studies

Description: Major welfare reform legislation, the Family Support Act (Public Law 100-485), became law in October 1988. This law embodies many of the components of the current welfare reform demonstrations. Under the law, a Medicaid extension up to 12 months would be given to people working their way off welfare as of April 1990. The first 6 months of this extension would be given regardless of income; the remaining 6 months would be contingent upon earnings below 185 percent of the Federal poverty level. This demonstration has waivers from the Health Care Financing Administration (HCFA) and the Family Support Administration. Under this project, recipients of Aid to Families with Dependent Children whose youngest child is over the age of 2 years are required to participate in employment-related activities. Additional day care services are provided. A Medicaid extension of 12 months, regardless of their earnings, is provided to recipients who work their way off welfare.

Status: In October 1987, the 12-month Medicaid extension was implemented statewide with the months in excess of the current law funded totally by the State, pending Federal savings from other demonstration components. Other components were phased into various counties throughout the first 2 years of the demonstration. Federal savings from other agencies' demonstration components have been accrued, permitting HCFA waivers to continue giving the full 12-month Medicaid extension regardless of earnings.

Texas Welfare Reform: Toward Independence

Project No.: 11-C-99620/6
Period: July 1989-June 1992
Award: Cooperative Agreement
Awardee: Texas Department of Human Services
P.O. Box 2960
Austin, Tex. 78769
Project Officer: Bonnie M. Edington
Division of Health Systems and Special Studies

Description: Major welfare reform legislation, the Family Support Act (Public Law 100-485), became law in October 1988. This law embodies many of the components of the current welfare reform demonstrations. Under the law, a Medicaid extension up to 12 months would be given to people working their way off welfare as of April 1990. The first 6 months of this extension would be given regardless of income; the remaining 6 months would be contingent upon earnings below 185 percent of the Federal poverty level. This demonstration had waivers from the Health Care Financing Administration and the Family Support Administration. The demonstration provides for a 12-month extension of child care benefits and a Medicaid extension of 6 to 12 months for people who work their way off welfare.

Status: With waivers, Texas implemented the extension in the Family Support Act 9 months early. Waivers ended in April 1990; however, recipients continue to be tracked for evaluation purposes.

Washington State Welfare Reform: Family Independence Program

Project No.: 11-C-99582/0
Period: July 1988-June 1993
Award: Cooperative Agreement
Awardee: Washington State Department of Social and Health Services
Mail Stop OB-44
Olympia, Wash. 98504
Project Officer: Bonnie M. Edington
Division of Health Systems and Special Studies
Mandate: Omnibus Budget Reconciliation Act of 1987
(Public Law 100-203)

Description: Major welfare reform legislation, the Family Support Act (Public Law 100-485), became law in October 1988. This law embodies many of the components of the current welfare reform demonstrations. Under the law, a Medicaid extension up

to 12 months would be given to people working their way off welfare as of April 1990. The first 6 months of this extension would be given regardless of income; the remaining 6 months would be contingent upon earnings below 185 percent of the Federal poverty level. This demonstration has waivers from the Health Care Financing Administration (HCFA), the Family Support Administration, and the U.S. Department of Agriculture (food stamps). In the experimental areas of the State, recipients of Aid to Families with Dependent Children receive a cash equivalent to the value of food stamps and, as an incentive to become employed, are given larger welfare benefits if they accept work-related training; are permitted to keep larger proportions of their earnings if they work; and are granted a 12-month Medicaid extension when they work their way off welfare, regardless of earnings.

Status: The State has HCFA waivers to continue giving the full 12-month Medicaid extension regardless of earnings.

Ohio Welfare Reform: Transitions to Independence

Project No.: 11-C-99619/5
Period: January 1988-February 1994
Award: Cooperative Agreement
Awardee: Ohio Department of Human Services
30 East Broad Street
Columbus, Ohio 43266-0423
Project Officer: Bonnie M. Edington
Division of Health Systems and Special Studies

Description: Major welfare reform legislation, the Family Support Act (Public Law 100-485), became law in October 1988. This law embodies many of the components of the current welfare reform demonstrations. Under the law, a Medicaid extension up to 12 months would be given to people working their way off welfare as of April 1990. The first 6 months of this extension would be given regardless of income; the remaining 6 months would be contingent upon earnings below 185 percent of the Federal poverty level. This demonstration had waivers from the Health Care Financing Administration (HCFA), the Family Support Administration, and the U.S. Department of Agriculture (food stamps). The demonstration permitted:

- "Learnfare" for Aid to Families with Dependent Children (AFDC) teenagers, giving incentive payment for school attendance and financial penalty for nonattendance.
- Mandatory work or training programs for AFDC recipients whose youngest child is 6 years of age or over.
- Voluntary work or training for AFDC recipients whose youngest child is under 6 years of age, with a 12-month Medicaid extension for those who worked their way off welfare.

Status: HCFA waivers for the demonstration ended as of March 31, 1990. The demonstration continues with waivers from the other Federal agencies.

New York Welfare Reform: Child Assistance Program

Project No.: 11-C-99583/2
Period: October 1988-September 1993
Award: Cooperative Agreement
Awardee: State of New York
Department of Social Services
40 North Pearl Street
Albany, N.Y. 12243
Project Officer: Bonnie M. Edington
Division of Health Systems and Special Studies
Mandate: Omnibus Budget Reconciliation Act of 1987
(Public Law 100-203)

Description: Major welfare reform legislation, the Family Support Act (Public Law 100-485), became law in October 1988. This law embodies many of the components of the current welfare reform demonstrations. Under the law, a Medicaid extension up to 12 months would be given to people working their way off welfare as of April 1990. The first 6 months of this extension would be given regardless of income; the remaining 6 months would be contingent upon earnings below 185 percent of the Federal poverty level. This demonstration had waivers from the Health Care Financing Administration (HCFA), the Family Support Administration, and the U.S. Department of Agriculture (food stamps). In the experimental areas, as an incentive to employment and to filing court orders for child support, recipients of Aid to Families with Dependent Children (AFDC) who went to work and filed for child support had more of their earnings and the collected child support disregarded in the calculation of their income for AFDC eligibility. Since this was expected to keep recipients eligible for welfare for a somewhat longer period during employment, those who worked their way off welfare received only a 4-month Medicaid extension. The control group received the current law's 4-, 9-, or 15-month Medicaid extension, and lower income families received the longer extensions.

Status: HCFA waivers for the demonstration ended as of March 31, 1990. The demonstration continues with waivers from the other Federal agencies.

Providing Technical Assistance to the Advisory Council on Social Security

Project No.: 99-C-99168/3
Period: August 1989-July 1991
Funding: $ 306,669
Award: Cooperative Agreement
Awardee: Project HOPE Research Center
(See page 74)
Project Officer: Gerald F. Riley
Division of Beneficiary Studies

Description: In June 1989, the Secretary of Health and Human Services established a 13-member Advisory

Council on Social Security. The Secretary has asked the Council to review:

- The long-range financial status of the Social Security program.
- The relationship of the Social Security trust funds to the Federal budget.
- The role of Social Security in U.S. retirement income policy.
- The impact of long-term care on the Medicare program.
- The adequacy and long-term capability of Medicare and Medicaid to finance the health and long-term care needs of the U.S. population.

The charter requires the Council to report to the Secretary and Congress by January 1, 1991. The Council has appointed an executive director who has assembled a small technical staff. Given the broad mandate, a limited timeframe, and a relatively small staff, the Council has sought assistance from the Health Care Financing Administration and Project HOPE to supplement the work of the staff. Project HOPE is assisting the Council in preparing for meetings and hearings, preparing background analyses and developing an impact analysis model, drafting Council background papers, and drafting interim and final reports of the Council.

Status: Project HOPE has prepared several briefing books and background materials for Council members. Project HOPE will assist in preparing the Council's final report in 1991.

Evaluation of Employer-Sponsored Retiree Health Insurance

Project No.: 18-C-99181/5
Period: June 1988-February 1990
Funding: $ 187,919
Award: Cooperative Agreement
Awardee: University of Illinois at Chicago
P.O. Box 4348
Chicago, Ill. 60680
Project Officer: Gerald F. Riley
Division of Beneficiary Studies

Description: The project uses data from the Employee Benefits Survey (1981-87) of the Bureau of Labor Statistics and from the Survey of Income and Program Participation (1984) of the U.S. Bureau of the Census to perform the following tasks:

- Describe the extent of retiree health insurance coverage, including how coverage varies across segments of the population and how it has changed in recent years. Describe the content of such coverage (e.g., services covered and cost-sharing provisions).
- Use econometric models to determine how medium and large firms decide to offer coverage and the characteristics of that coverage.
- Determine in what ways employee retiree benefits and medigap policies exceed Medicare coverage among the aged.
- Determine the number of aged in the United States who currently have various types of supplemental insurance and combinations of such insurance.
- Determine the prevalence and causes of benefit termination among retirees.
- Assess the implications of these findings on Medicare policy and on the regulation of employer-sponsored retiree health coverage.

Status: The cooperative agreement was extended for 6 months to add a task that will describe the ways in which firms coordinate their employee health benefits with Medicare for their retirees. The information was gathered through a survey, which was implemented in October 1988. An article entitled "Employer-Sponsored Health Insurance for Retired Americans" was published in *Health Affairs* (Spring 1990). A draft final report was received in the Office of Research and Demonstrations and is currently being revised.

Medicare Financing Simulation Model

Project No.: 99-C-98526/1
Period: August 1988-November 1989
Funding: $ 34,553
Award: Cooperative Agreement
Awardee: Brandeis University Research Center
(See page 73)
Project Officer: Jesse M. Levy
Division of Reimbursement and Economic Studies
Mandate: Medicare Catastrophic Coverage Act of 1988
(Public Law 100-360)

Description: The purpose of this project was to assess the feasibility of adapting The Urban Institute's Transfer Income Model (TRIM) to perform policy simulations on the Medicare program. The objectives were to:

- Assess the feasibility of developing a model within TRIM to evaluate the effects of changes in cost sharing, covering the use of services, physician and hospital payments, and financial outlays of the Medicare program.
- Determine the effect of different catastrophic insurance thresholds, income-related premiums, and any of these kinds of policy changes on different income and wealth groups as well as differences among geographical areas.

This research task enabled the Health Care Financing Administration to determine the effect of these changes on Medicaid eligibility.

Status: The final report, "The Feasibility of a Medicare Microsimulation Model," is available from the National Technical Information Service, accession number PB90-242330.

Pricing and Coverage Decisions for New and Existing Technologies

Project No.: 99-C-99168/3
Period: August 1988-July 1990
Funding: $ 71,877
Award: Cooperative Agreement
Awardee: Project HOPE Research Center
(See page 74)
Project Officer: Michael Borowitz
Division of Reimbursement and Economic Studies

Description: The purpose of this project is to develop a methodology or set of methodologies to accurately price new and existing technologies that have been approved for coverage under Medicare Part A and Part B.

Status: During the project's first year, working papers were developed on technology issues in Medicare coverage and reimbursement and on methodological options and selection criteria that might be used to determine equitable payments for new technologies. A list of newer technologies and a bibliography on technology issues were prepared. Currently, several methodologies developed in the first phase of the project are being used to examine two new technologies. In the coming year, a report illustrating applications of selected methodologies is planned.

An Analysis of Medicare Expenditures for Ambulance Services

Project No.: 99-C-99168/3
Period: August 1989-July 1991
Funding: $ 127,834
Award: Cooperative Agreement
Awardee: Project HOPE Research Center
(See page 74)
Project Officer: Herbert A. Silverman
Division of Program Studies
Mandate: Omnibus Budget Reconciliation Act of 1989
(Public Law 101-239)

Description: This project was funded to produce data for a Report to Congress as mandated by Public Law 101-239. The project is designed to analyze spending for ambulance services under Medicare. Both the nature and composition of spending for ambulance services and the amount of ambulance services used by beneficiaries with different characteristics will be examined. An attempt will be made to measure the difference between Medicare payments for basic ambulance transportation and the payments that would have been made had other transportation been used. Differences between urban and rural patterns in the use of and expenditures for ambulance services under Medicare will also be addressed, as will differences between Medicare and Medicaid in coverage and expenditures for ambulance services.

Status: Operating and cost data have been collected from samples of ambulance companies in California, Texas, Michigan, and Massachusetts. A survey of Medicaid coverage of and expenditures for ambulance services in California, Georgia, Iowa, Massachusetts, Michigan, New Mexico, New York, and Texas has been completed. Data from claims submitted to Medicare for ambulance services are being developed. Data from these services will be analyzed and integrated in order to develop the mandated Report to Congress. Policy recommendations suggested by the findings will be included in the report, which is expected to be completed in the first half of 1991.

Analysis of Adverse Drug Reaction Coding on the Hospital Discharge Records of the Medicare Elderly

Funding: Intramural
Project Director: Steven L. Hass
Division of Beneficiary Studies

Description: This project is investigating the efficacy of using hospital discharge records of elderly Medicare beneficiaries in adverse drug reaction (ADR) studies. Longitudinal trends in the use of external cause-of-injury codes (E-Codes) and diagnostic codes that indicate ADRs under the *International Classification of Diseases, 9th Revision, Clinical Modification* coding system are being studied. The demographics of the subpopulation for which such a coding is made will be reported.

Status: Preliminary results indicate a nearly constant level of diagnostic-coded ADRs from 1983 through 1988. However, the level of E-Coded ADR reports has undergone a more than threefold increase. In total, the International Classification of Disease and E-Code ADR codings appear on 2.5 percent of the hospital discharge records of elderly Medicare beneficiaries. The project staff anticipates that ADRs for specific drugs and drug category investigations will be undertaken. Further analysis is under way and a report will be generated.

Study of Inappropriate Use of Medications by Medicare Beneficiaries

Project No.: 99-C-99169/5
Period: October 1988-April 1989
Funding: $ 23,279
Award: Cooperative Agreement
Awardee: University of Minnesota Research Center
(See page 75)
Project Officer: Dennis M. Nugent
Division of Long-Term Care Experimentation

Description: Medications prescribed by physicians and consumed by their patients are sometimes ineffective or even harmful. For both physiologic and social reasons, the elderly are more than any other age group vulnerable to the consequences of taking unnecessary or deleterious medication. Before developing a policy to address this

issue, it is important to have reliable estimates of the prevalence of inappropriate medication use among the elderly population and to understand why it occurs. The purpose of this study is to review and summarize existing literature to determine the magnitude of the problem and to identify future research directions.

Status: The final report, "Study of Inappropriate Use of Medications by Medicare Beneficiaries," will soon be available from the National Technical Information Service. Although the report does not certify the extent of inappropriate medication use by elderly Medicare beneficiaries, it does suggest that overuse of medications, adverse drug reactions, and drug interactions are common in the elderly. The report recommends a research agenda that includes developing improved criteria for judging the appropriateness of medication use and applying these criteria to a population-based sample of elderly Medicare beneficiaries.

Factors Associated With Hospitalizations for Active Tuberculosis

Funding: Intramural
Project Director: Joan L. Warren
Division of Beneficiary Studies

Description: Elderly patients account for a disproportionate number of active tuberculosis cases. Tuberculosis is an illness that can be treated in the community and should not require hospitalization. This project is a collaborative effort with the Centers for Disease Control (CDC) to identify factors associated with hospital admissions for tuberculosis among the elderly. The analysis includes regional variation in rates of hospitalization for tuberculosis, as well as patients' sociodemographic characteristics and comorbidities.

Status: This project is in the early developmental stage. CDC is generating data for the number of cases of active tuberculosis reported from 1984-88 to local health departments.

Trends in Pneumonia Hospitalizations Among the Medicare Elderly

Funding: Intramural
Project Director: Enrico Melson
Division of Beneficiary Studies

Description: Hospitalization rates for all pneumonias and for different types of pneumonia will be analyzed using the Health Care Financing Administration's Medicare provider analysis and review files for 1984 through 1989. Monthly variations and trends over the 5-year period will be described, as will associated comorbidities.

Status: Initial analysis has been carried out on 2 percent of the elderly Medicare beneficiaries, and analysis on the 100 percent file has begun.

Use of Medicare Services by Disabled Enrollees Under 65 Years of Age

Funding: Intramural
Project Director: Gerald F. Riley
Division of Beneficiary Studies

Description: More research has been devoted to the Medicare aged population than to the population of disabled enrollees under 65 years of age. Yet, disabled enrollees account for approximately 10 percent of Medicare enrollment, and Medicare expenditures for them have been rising faster than for aged enrollees. To increase knowledge of the Medicare disabled population, patterns of health services used by the disabled were analyzed. In particular, this population was analyzed by type of disability award (i.e., disabled worker, adult disabled in childhood, or disabled spouse). Also, the aged (those 65 years of age or over) Medicare population who were formerly disabled Medicare beneficiaries were studied. In another study, Medicare utilization data have been linked to Social Security Administration (SSA) data on a cohort of disabled workers who first became entitled to disability benefits in 1972. Their Medicare use from 1974 through 1981 was studied to explore the relation of disability characteristics to Medicare use over time. The specific objectives of the project were to:

- Describe the levels and patterns of reimbursable Medicare costs over time at the individual level for a cohort of disability beneficiaries from 1974 through 1981.
- Identify the characteristics of disabled beneficiaries that are associated with different reimbursement levels and patterns.
- Describe the individual cost and utilization components that make up the overall reimbursement amounts.

Status: The following articles have been published:

- Bye, B., and Riley, G.: Eliminating the Medicare waiting period for Social Security disabled-worker beneficiaries. *Social Security Bulletin.* Vol. 52, No. 5. Pub. No. SSA 13-11700. Office of Research and Statistics, Social Security Administration. Washington. U.S. Government Printing Office, May 1989.
- Bye, B., Riley, G., and Lubitz, J.: Medicare utilization by disabled-worker beneficiaries: A longitudinal analysis. *Social Security Bulletin.* Vol. 50, No. 12. Pub. No. SSA 13-11700. Office of Research and Statistics, Social Security Administration. Washington. U.S. Government Printing Office, December 1987.
- Lubitz, J., and Pine, P.: Health care use by Medicare's disabled enrollees. *Health Care Financing Review.* Vol. 7, No. 4. HCFA Pub. No. 03223. Office of Research and Demonstrations, Health Care Financing Administration. Washington. U.S. Government Printing Office, Summer 1986.

A paper on total Medicare costs of disabled-worker beneficiaries from time of entitlement to age 65 has

been written and is currently being revised for publication.

Studies of Medicare Use Before Death

Funding: Intramural
Project Directors: Gerald F. Riley and James D. Lubitz
Division of Beneficiary Studies

Description: These studies examine the use of Medicare services in the last years of life. This information is important for several reasons, one being that a large percentage of Medicare expenditures occurs during the last year of an enrollee's life. Also relevant is the increased interest in hospice care as an alternative form of care for the terminally ill.

Status: Findings from the first study indicate that:

- Twenty-eight percent of Medicare expenditures are for persons in their last year of life.
- These persons receive more than six times the reimbursements of other enrollees.
- The relative share of Medicare expenditures in behalf of enrollees in their last year of life has changed little from 1967 to 1979.

A number of papers have been published on this topic and among them are Lubitz, J., and Prihoda, R.: Use and costs of Medicare services in the last 2 years of life. *Health Care Financing Review*. Vol. 5, No. 3. Spring 1984. A second study analyzes Medicare use by cause of death. The study uses cause of death data from the National Center for Health Statistics linked to Medicare data. Medicare expenditures in the last year of life are examined by cause of death (e.g., cancer and heart attack), type of service, age, and sex. The results indicate considerable variation in Medicare reimbursements in the last year of life by cause of death. The results of the study were published in Riley, G., Lubitz, J., Prihoda, R., and Rabey, E.: The use and costs of Medicare services by cause of death. *Inquiry*. Vol. 24, No. 3. Fall 1987. Another paper features an analysis of trends in the use of Medicare services, by cause of death, for up to 6 years before death. Longitudinal patterns of Medicare use by cause of death was published in the *Health Care Financing Review*. Vol. 11, No. 2. Winter 1989. Some of the data published in the 1984 article, "Use and costs of Medicare services in the last 2 years of life," are being updated to determine if there has been any change in the relative shares of Medicare expenditures accounted for by decedents and survivors. Preliminary results indicate there has been little change. Analysis is continuing.

Medicare Cohort Studies

Funding: Intramural
Project Director: Alma B. McMillan
Division of Beneficiary Studies

Description: The 5-percent Continuous Medicare History Sample file has been aggregated for 15 years (1974-88). The file makes it possible to study patterns and trends in the use and costs of services, as well as outcomes of care, for cohorts of Medicare enrollees beginning in 1974. The objective of this project is to follow groups of aged enrollees for a period of 15 years (1974-88). Several studies will be designed to examine questions similar to the following:

- What are the utilization histories for people on the program after 10 years?
- Do the same people have high services year after year?
- What is the natural history of enrollees after events like fracture of the femur?
- What combination of illnesses (e.g., cancer and heart disease) do people have over a 10-year period?

Answers to these and similar questions will be an invaluable addition of new information on the aged Medicare population.

Status: The study focuses on three cohorts of Medicare enrollees—65, 75, and 85 years of age in 1974. The Bureau of Data Management and Strategy, Health Care Financing Administration, has produced data on the number of enrollees in each of the cohort groups and their mortality. Data on hospitalizations and average per capita reimbursement amounts have also been produced and are being analyzed.

Post-Hospitalization Outcomes Studies

Project No.: 500-90-0046
Period: September 1990-June 1993
September 1990-May 1991
(Design Phase)
September 1991-June 1993
(Implementation Phase)
Funding: $ 835,095
$ 152,286 (Design Phase)
$ 682,809 (Implementation Phase)
Award: Contract
Contractor: School of Public Health
University of Minnesota
420 Delaware Street, SE., Box 197
Minneapolis, Minn. 55455
Project Officer: Joan L. Warren
Division of Beneficiary Studies

Description: This project is designed to assess the outcomes of patients who have been hospitalized for specific conditions or procedures. The studies will follow the patients after hospitalization to obtain detailed information about their health and functional status and health care utilization. This information will provide a more complete profile of each episode of illness. The goals of this project are to:

- Develop knowledge about the natural history following hospitalization for major health conditions.
- Determine the factors that are related to patients' outcomes following discharge.
- Develop indicators of patients who are at high risk for complications following hospitalization.
- Identify ways of preventing complications.

Status: This project is in the early developmental stage.

Health Care Prevention and Access

Prevention

Prevention of Falls in the Elderly

Project No.: 95-C-98578/9
Period: September 1984-December 1989
Funding: $ 695,894
Award: Cooperative Agreement
Awardee: Kaiser Foundation Research Institute
Health Services Research Center
4610 Southeast Belmont Street
Portland, Ore. 97215
Project Officer: Margaret A. Coopey
Division of Long-Term Care Experimentation

Description: In September 1984, a cooperative agreement was awarded to the Kaiser Foundation Research Institute to test the cost effectiveness of a comprehensive environmental and behavioral program designed to prevent falls among persons 65 years of age or over and to estimate the net financial benefits or costs to a health maintenance organization and the Medicare program of a given level of falls prevention for a defined target population. The project's secondary objectives were to increase understanding of the epidemiology of falls and associated injuries and to develop an improved method of predicting the risk of falls in an elderly population. Funding support for this demonstration was supplemented by the National Institute on Aging, the Robert Wood Johnson Foundation, and Kaiser Foundation Hospitals, Inc. This is a randomized study of 3,182 persons, 65 years of age or older, who are members of Kaiser Permanente Medical Care program in Portland, Oregon.

Status: All participants received an initial home audit to assess their environmental and physical risk factors for falls. They were then randomly placed into 1 of 2 groups—an intervention group or an assessment-only control group. The intervention group received a special falls prevention program that included a self-management educational curriculum and the installation of safety equipment and minor home renovations to correct identified safety hazards. Data on the incidence of falls and associated morbidities and fall-related medical care utilization were collected for a period of 2 years on both the control and intervention groups through self-reports by the study participants. In addition, a retrospective audit of the participants' medical records was completed to validate the incidence of falls requiring medical care and to determine the associated medical care costs. The followup period to assess the incidence of falls ended December 1987. The cooperative agreement was extended until December 1989 to allow for completion of the program's evaluation. The final report, which was expected in mid-1990, has not been received.

The Economy and Efficacy of Medicare Reimbursement for Preventive Services

Project No.: 95-C-98516/4
Period: September 1985-September 1991
Funding: $ 1,800,000
Award: Cooperative Agreement
Awardee: University of North Carolina
Department of Social and Administrative Medicine
300 Bynam Hall, 008A
Chapel Hill, N.C. 21514
Project Officer: Sherrie L. Fried
Division of Health Systems and Special Studies

Description: The University of North Carolina at Chapel Hill has implemented the preventive services demonstration in 10 medical practices. Approximately 2,400 beneficiaries were randomly allocated to 1 of 4 groups—clinical screening only, health promotion only, clinical screening plus health promotion, and the usual care control. Clinical screening and health promotion services are reimbursed separately at annual rates of $59.94 for screening and $44.33 for health promotion services. The evaluation will be conducted by the Department of Social and Administrative Medicine and the Health Services Research Center of the University of North Carolina at Chapel Hill.

Status: In October 1986, the project began offering clinical screening, health promotion, and followup services to appropriate participants. In June 1988, the project reached its target population of 2,400 clients. The 4-year operational phase, in which preventive services were offered, ended September 30, 1990. Followup interviews of demonstration beneficiaries are now being conducted. The final year of the project will be devoted to the evaluation of the demonstration for which preliminary work has begun.

Preventive Health Services for Medicare Beneficiaries: Demonstration and Evaluation

Project No.: 95-C-99162/3
Period: May 1988-April 1992
Funding: $ 1,320,000
Award: Cooperative Agreement
Awardee: The Johns Hopkins University
School of Hygiene and Public Health
624 North Broadway
Baltimore, Md. 21205
Project Officer: Sherrie L. Fried
Division of Health Systems and Special Studies
Mandate: Consolidated Omnibus Budget Reconciliation Act of 1985 (Public Law 99-272)

Description: The Johns Hopkins University will provide preventive services to a representative population of Medicare beneficiaries residing in the eastern third of

Baltimore City and in small areas of Baltimore County. After a baseline interview covering areas of health status, risk, and sociodemographics, the population will be randomly assigned to either an intervention or control group. Preventive services screening and intervention will be performed by the beneficiary's own physician. The University will conduct a comprehensive evaluation to assess the cost effectiveness of providing preventive services.

Status: The operational phase began in May 1988. A detailed implementation protocol for the demonstration was received and approved by the Health Care Financing Administration. The 4,460 participants who completed baseline interviews were randomly assigned to treatment and control groups. The project has reached its target for enrolling beneficiaries. The first round of preventive services has been delivered to the treatment group, and the University is in the process of delivering the second round of preventive services. Preliminary work on the evaluation has begun.

Preventive Health Services for Medicare Beneficiaries: San Diego Demonstrative Project

Project No.: 95-C-99160/9
Period: May 1988-April 1992
Funding: $ 1,127,000
Award: Cooperative Agreement
Awardee: San Diego State University Foundation
Graduate School of Public Health
San Diego State University
San Diego, Calif. 92182-1900
Project Officer: Debbie C. Van Hoven
Division of Health Systems and Special Studies
Mandate: Consolidated Omnibus Budget Reconciliation Act of 1985 (Public Law 99-272)

Description: Medicare patients who are currently enrolled in the Secure Horizons health maintenance organization (HMO) will be targeted for preventive services. The sample size was originally expected to be 2,400; however, the HMO requested and received approval to reduce its sample size to 1,800, from which half were randomly assigned to the treatment group and to the control group. The San Diego School of Public Health will conduct a comprehensive evaluation to assess the cost effectiveness of providing preventive services.

Status: This project is currently in the operational phase. A detailed implementation protocol was reviewed and approved prior to implementation in May 1988. The demonstration has conducted 32 orientation sessions. Baseline clinical assessments were completed for each participant enrolled in the demonstration (both treatment and control). The treatment group took part in several wellness workshops which make up the intervention. These workshops provide participants with individual counseling and feedback based on results of several questionnaires (i.e., health risk appraisal, health status inventory, and the Center for Epidemiologic Studies depression scale from the Centers for Disease Control). The last wave of workshops ended in February 1990. The treatment group is currently undergoing clinical examinations which include weight, height, and blood pressure measurements. Participants are referred for followup care as appropriate. All treatment participants are being called and encouraged to maintain healthy behavior. Preliminary data analysis has begun.

University of California, Los Angeles, Medicare Preventive Demonstration

Project No.: 95-C-99165/9
Period: May 1988-April 1992
Funding: $ 1,246,000
Award: Cooperative Agreement
Awardee: University of California
School of Public Health
405 Hilgard Avenue
Los Angeles, Calif. 90024-1406
Project Officer: Debbie C. Van Hoven
Division of Health Systems and Special Studies
Mandate: Consolidated Omnibus Budget Reconciliation Act of 1985 (Public Law 99-272)

Description: Medicare beneficiaries who are current patients of the University of California, Los Angeles (UCLA) university-based clinic will be targeted for preventive and dental referral services. Approximately 1,930 participants were randomly assigned to treatment or control groups. The first and second rounds of preventive services have been delivered, and the University is in the process of delivering the third and final round of services. UCLA will also conduct a comprehensive evaluation to assess the cost effectiveness of providing such preventive services.

Status: This project is currently in the operational phase. A detailed implementation protocol was reviewed and approved prior to implementation in May 1988. During Spring 1989, the first wave of telephone baseline interviews was conducted for both treatment and control participants. Many treatment participants also received services through the Health Promotion Clinic, the major intervention component, which offers screening, assessment, health education, and community referral. Preliminary data analysis has begun.

Preventive Health Services for Medicare Beneficiaries

Project No.: 95-C-99159/3
Period: May 1988-April 1992
Funding: $ 1,300,000
Award: Cooperative Agreement
Awardee: University of Pittsburgh
Department of Epidemiology
130 Desoto Street
Pittsburgh, Pa. 15261

Project Officer: Sherrie L. Fried
Division of Health Systems and Special Studies

Mandate: Consolidated Omnibus Budget Reconciliation Act of 1985 (Public Law 99-272)

Description: The demonstration will provide preventive services to Medicare beneficiaries residing in rural counties in western Pennsylvania. Potential demonstration participants will receive an in-person health-risk appraisal and will be randomly assigned to 2 treatment groups and 1 control group. The treatment groups will include beneficiaries receiving services at clinics and physician offices. The University of Pittsburgh will conduct a comprehensive evaluation to assess the cost effectiveness of providing preventive services.

Status: The operational phase began in May 1988. A detailed implementation protocol for the demonstration was received and approved by the Health Care Financing Administration. The 3,884 participants who completed a baseline questionnaire and interview were randomly assigned to 3 groups—hospital-based prevention, physician office-based health prevention, and a control group. The project has reached its target for enrolling beneficiaries. The first round of preventive services has been delivered to the treatment group, and the University is in the process of delivering second-year reevaluations in the hospital or in the physician's office. Preliminary work on the evaluation has begun.

Cost Utility of Medicare Reimbursement for Preventive Services in a Health Maintenance Organization

Project No.: 95-C-99161/0
Period: May 1988-April 1992
Funding: $ 1,320,000
Award: Cooperative Agreement
Awardee: University of Washington
School of Public Health and Community Medicine
Seattle, Wash. 98195
Project Officer: Sherrie L. Fried
Division of Health Systems and Special Studies
Mandate: Consolidated Omnibus Budget Reconciliation Act of 1985 (Public Law 99-272)

Description: The University of Washington will implement a randomized design to assess the cost savings and changes in health-related quality of life associated with providing a preventive-service package (annual health risk assessment, individual health promotion, and group counseling) for Medicare beneficiaries enrolled in Group Health Cooperative (GHC) of Puget Sound. The project will take place in Seattle, Washington, at 4 GHC medical centers.

Status: The operational phase began in May 1988. A detailed implementation protocol for the demonstration was received and approved by the Health Care Financing Administration. The 2,558 enrollees completed a baseline questionnaire and interview and were randomly assigned to treatment or control groups. The project has reached its target for enrolling beneficiaries. The first round of preventive services has been delivered to the treatment group, and the University is in the process of delivering the second round of preventive services. Preliminary work on the evaluation has begun.

Cross-Cutting Evaluation of Medicare Prevention Demonstrations

Project No.: 500-87-0030
Period: July 1988-April 1992
Funding: $ 299,051
Award: Technical Support: Evaluation of Demonstrations
(See page 76)
Contractor: Abt Associates, Inc.
55 Wheeler Street
Cambridge, Mass. 02138
Project Officer: Bonnie M. Edington
Division of Health Systems and Special Studies
Mandate: Consolidated Omnibus Budget Reconciliation Act of 1985 (Public Law 99-272)

Description: Abt Associates is conducting a cross-cutting evaluation of the five Medicare prevention demonstrations which test the effectiveness of providing disease prevention and health promotion services to Medicare beneficiaries. The waived services include health screening, health-risk appraisals, immunizations, and counseling and instruction on various lifestyle or behavioral health factors (e.g., smoking, nutrition, and use of medication). In May 1988, the Health Care Financing Administration awarded cooperative agreements to the following five institutions to implement the demonstration:

- The Johns Hopkins University, School of Hygiene and Public Health.
- San Diego State University, School of Public Health.
- University of California at Los Angeles, School of Public Health.
- University of Pittsburgh, School of Public Health.
- University of Washington, School of Public Health and Community Medicine.

Status: The demonstration projects were initiated in Spring 1989 and will provide preventive services for 24 months. Abt Associates has been working closely with all the sites to assist implementation efforts, and two all-sites meetings have been held. Abt has developed a minimum data set of a data collection plan. A preliminary Report to Congress was received in Summer 1989. An interim report will be prepared

midway through the demonstrations, and a final report is expected in December 1992.

Implementation of the Cost-Effectiveness Study of Medicare Coverage for Influenza Vaccine

Project No.: 500-87-0030
Period: July 1988-September 1992
Funding: $ 1,042,881
Award: Technical Support: Evaluation of Demonstrations
(See page 76)
Contractor: Abt Associates, Inc.
55 Wheeler Street
Cambridge, Mass. 02138
Project Officer: John F. Meitl
Division of Health Systems and Special Studies
Mandate: Omnibus Budget Reconciliation Act of 1987
(Public Law 100-203)

Description: The purpose of this project is to conduct a study to determine the cost effectiveness of furnishing an influenza vaccination as a Medicare-covered benefit. To implement this study, the Health Care Financing Administration (HCFA) is working closely with the Centers for Disease Control, which has funded the following demonstration projects with intervention and comparison areas in 9 sites—The University of Rochester Medical Center; Michigan Department of Public Health; San Antonio Metropolitan Health District; North Carolina Department of Human Resources; Massachusetts Department of Public Health; Oklahoma State Department of Health; Maricopa County, Arizona Department of Health Services; Ohio Department of Health; and Allegheny County, Pennsylvania Health Department. HCFA funded a tenth site in Illinois in March 1990. In addition, statewide projects were initiated in Indiana, Louisiana, Tennessee, and Virginia during the 1989-90 influenza season; and statewide projects were started in Arkansas, Colorado, Idaho, Mississippi, Montana, and Wisconsin during the 1990-91 influenza season. In the statewide sites, the carrier treats influenza vaccine as a covered Medicare benefit and reimburses providers for the cost of vaccine and its administration. The contractor, Abt Associates, will assist the sites in implementing the demonstration and in preparing a descriptive evaluation of the demonstration. Abt is ensuring that appropriate data collection activities take place so that it will be able to conduct the cost-effectiveness analysis.

Status: As of September 30, 1990, there were 13 operational demonstration sites, including the 9 original sites that have been operational for 2 flu seasons and the first 4 statewide sites that became operational during the past flu season (i.e., 1989-90). These 13 sites processed almost 1 million claims during the 1989-90 influenza season. For the 1990-91 influenza season, 20 operational sites are planned. In addition to the 13 sites that were previously funded, Illinois is planned for inclusion with the same design as the original 9 sites and the 6 new statewide sites. It is anticipated that these sites will process over 2 million claims during the 1990-91 influenza season.

Evaluation of the Cost Effectiveness of Medicare Coverage of Influenza Vaccine

Project No.: 500-89-0049
Period: September 1989-September 1993
Funding: $ 3,062,471
Award: Contract
Contractor: Abt Associates, Inc.
55 Wheeler Street
Cambridge, Mass. 02138
Project Officer: Edward T. Hutton
Division of Health Systems and Special Studies
Mandate: Omnibus Budget Reconciliation Act of 1987
(Public Law 100-203)

Description: The objective of this project is to evaluate the cost effectiveness of furnishing influenza vaccinations to Medicare Part B beneficiaries as a Medicare-covered benefit. The demonstration that includes intervention and comparison areas in 10 sites and 10 statewide vaccine projects is being evaluated. In the statewide sites, an influenza vaccination is being treated as a covered benefit; and the local carrier is paying providers for the cost of the vaccine and its administration. The evaluation will measure the cost of the immunization benefit relative to the reduction in pneumonia and influenza hospitalization admissions (attributable to vaccine use) during the influenza season. The vaccine's effectiveness in preventing pneumonia and influenza hospital admissions will also be estimated through results from case control studies being introduced to the demonstration.

Status: During the first year of the contract, the evaluation contractor contributed to the development of a Report to Congress that presented the results of the first 2 years of the demonstration. Abt Associates also completed the telephone component of the vaccination rate survey for the 1989-90 influenza season and implemented procedures to collect data critical to the evaluation. Since 2 years remain in the demonstration, analysis efforts are still developmental.

Effectiveness of Inactivated Influenza Vaccine in the Elderly

Project No.: 71-C-99616/5
Period: December 1989-November 1990
Funding: $ 264,843
Award: Cooperative Agreement
Awardee: University of Michigan
School of Public Health
475 East Jefferson, Room 1310
Ann Arbor, Mich. 48109-1248

Project Officer: Edward T. Hutton
Division of Health Systems and Special Studies

Mandate: Omnibus Budget Reconciliation Act of 1987
(Public Law 100-203) (Funded as part of the Demonstration of the Cost Effectiveness of Influenza Vaccine)

Description: The study, which is expected to continue through both the 1990-91 and 1991-92 influenza seasons, consists of a nonresidential, community-acquired illness component and a residential, nursing home component. The nonresidential component is a case control study of the influenza vaccine's effectiveness in preventing hospitalization for pneumonia and influenza during the influenza season. The target sample size for the nonresidential component is an annual recruitment of at least 468 cases and 2 controls per case. Confounding factors including age, sex, and health risks will be considered. The residential component is a cohort design with an alternative plan of using a case control design in the event that the number of participating nursing homes and/or incidence of influenza is insufficient for the pure cohort design. At least 1,000 residents are needed for the cohort design. The outcome variables are the occurrence of an influenza-like illness during the time that the influenza virus is shown to be circulating; medical complications (e.g., pneumonia) following influenza or an influenza-like illness; hospitalization for pneumonia and/or influenza; total hospitalizations within 2 weeks following influenza or an influenza-like illness; and the duration of hospitalization.

Status: During the first year of the study more than 800 cases were identified for recruitment in the nonresidential case control study. Additionally, controls were identified with an eventual target of recruiting 2 community controls per case. As the study prepares for the second of an anticipated 3 influenza seasons of study, 16 hospitals are expected to participate in the prospective recruitment of cases. The residential study component completed a survey (63-percent response rate) of the 83 nursing homes in the 7-county study area. Also, retrospective residential data collection systems are in place.

The Utilization and Evaluation (Effectiveness and Cost Effectiveness) of Pneumococcal Vaccine in the Medicare Program

Funding: Intramural
Project Director: Marshall McBean
Division of Beneficiary Studies

Description: The Immunization Practice Advisory Committee of the Public Health Service recommends the pneumococcal vaccine for all people 65 years of age or over, and Medicare has reimbursed for this preventive service since July 1981. The national goal is to immunize 60 percent of Medicare beneficiaries with the pneumococcal vaccine by 1990. The current immunization level is estimated to be approximately 10 percent. In 1985, Medicare reimbursed for the administration of almost 460,000 doses of vaccine and there were approximately 1,750,000 new Medicare enrollees. Although the vaccine is recommended by the Committee, 1 randomization control trial published in 1986 and 1 unpublished study, both done on Veterans Administration beneficiaries, have questioned the effectiveness of the vaccine. The project will describe vaccine utilization as well as the effectiveness and cost effectiveness of the vaccine for Medicare beneficiaries. The project has 4 major aspects:

- Part 1 will describe the utilization of pneumococcal vaccine in Medicare beneficiaries in 1985 using the Part B Medicare Annual Data procedure and beneficiary files and the Health Insurance Skeleton Eligibility Write-off file. The characteristics of immunized and unimmunized beneficiaries will be examined, as well as those of the providers of the vaccine, to identify ways of increasing coverage.
- Part 2 will be a case control study of the effectiveness and the cost effectiveness of pneumococcal vaccine using all Medicare provider analysis and review reported cases of pneumococcal bacteremia and pneumococcal pneumonia in the United States as the outcome.
- Part 3 will evaluate the effectiveness and cost effectiveness of a pneumococcal vaccine program administered by county health departments in collaboration with the Baltimore County Health Department and the Johns Hopkins Center on Aging.
- Part 4 will evaluate the effectiveness of the proposed statewide pneumococcal vaccine program in Hawaii in reducing morbidity and hospital costs following pneumococcal pneumonia.

Status: Major project activities include:

- Part 1. A paper describing the use of pneumococcal vaccine among elderly Medicare beneficiaries for the years 1986-88 has been submitted for publication.
- Part 2. No further progress.
- Part 3. In county-sponsored clinics in Anne Arundel, Baltimore, Carroll, Harford, and Howard counties, Maryland, more than 10,000 Medicare beneficiaries received either pneumococcal or influenza vaccine in preparation for the 1987-88 and 1988-89 influenza seasons. Approximately 3,000 have received pneumococcal vaccine. The entire population is being followed for hospitalizations resulting from various categories of pneumonia.
- Part 4. Hawaii carried out its pneumococcal vaccine immunization program on the island of Oahu and the neighboring islands from September 1, 1988 through February 1989 and administered more than 15,000 doses of vaccine on Oahu. A cohort study based on the data from the Hawaii immunization campaign and that from the Medicare Part B carrier data from 1982-88 has been started. The date of immunization for those who received the vaccine will be known, and the incidence of hospitalization for pneumococcal and other illnesses in this group will be compared with that for unimmunized beneficiaries.

Preventive Health Care for Medicaid Children: Relative Factors and Costs

Project No.: 18-C-98897/5
Period: October 1986-September 1990
Funding: $ 197,000
Award: Cooperative Agreement
Awardee: American Academy of Pediatrics
144 Northwest Point Boulevard
P.O. Box 927
Elk Grove Village, Ill. 60007
Project Officer: Marilyn B. Hirsch
Division of Program Studies

Description: The purpose of this project is to study preventive care received by children under the Medicaid program. In addition to Health Care Financing Administration (HCFA) data, data from the early and periodic screening, diagnosis, and treatment (EPSDT) program will be used. The study will use two sample groups of children enrolled in the California Medicaid program:

- Children continuously enrolled in Medicaid from 1981 through 1984.
- Children continuously enrolled in Medicaid, at a minimum, during 1981.

Differences in quantities and types of preventive services by client, organizational, and policy variables will be identified. For all children continually enrolled in Medicaid from 1981 through 1984, the impact of preventive services received in 1981-83 on utilization, costs of care, and some quality measures in 1984 will be studied. The source of Medicaid data will come from HCFA's Tape-to-Tape project and the State EPSDT system.

Status: This project was funded in October 1986. Analysis of the data has been completed. The American Academy of Pediatrics received an extension through September 1990 to complete the final report.

Health Care Services for Children Under Medicaid

Project No.: 18-P-98011/3
Period: August 1981-July 1991
Funding: $ 504,311
Award: Grant
Grantee: The Johns Hopkins University
School of Medicine
Department of Pediatrics
720 Rutland Avenue
Baltimore, Md. 21205
Project Officer: Benson L. Dutton
Division of Reimbursement and Economic Studies

Description: This is a grant for a comparative study of health care services for children, using billing claims and eligibility data files from the State of Maryland. Information on the cost and effectiveness of services for children eligible for the Medicaid early and periodic screening, diagnosis, and treatment program will be sought. Data on the costs and utilization of services for children using private practitioners, hospital clinics, emergency rooms, and various combinations of delivery systems will serve as the basis of comparison for this analysis.

Status: Using the data files for the Johns Hopkins Hospital Title V Children and Youth Clinic, use of services by Medicaid and self-pay patients has been compared. Within an organized program, utilization differences were small. The implications of these findings were explored, particularly in light of other studies. Services for children with asthma were studied in the Children and Youth Project and in the middle-class population of the Columbia, Maryland, Medical Plan. Services were far more numerous, and thus more costly, for the children and youth Medicaid population than for those of the Columbia medical plan. The monitoring of Medicaid services, including diagnosis-specific studies for other chronic and acute problems, with cost containment as the goal, will be tested against the large State Medicaid file. A final report is expected in 1991.

Evaluation of the Omnibus Budget Reconciliation Act of 1987 Medicare Payment for Therapeutic Shoes for Individuals with Severe Diabetic Foot Disease Demonstration

Project No.: 500-87-0028
Period: June 1988-June 1991
Funding: $ 1,179,107
Award: Technical Support: Evaluation of Demonstrations
(See page 76)
Contractor: Mathematica Policy Research, Inc.
P.O. Box 2393
Princeton, N.J. 08543-2393
Project Officer: Sherrie L. Fried
Division of Health Systems and Special Studies
Mandate: Omnibus Budget Reconciliation Act of 1987
(Public Law 100-203)

Description: The demonstration will test the cost effectiveness of furnishing therapeutic shoes to Medicare beneficiaries with severe diabetic foot disease. The project will be conducted for an initial period of 24 months. If the coverage of shoes is found to be cost effective, the demonstration will end, and shoes will become a covered service under Medicare. If the findings are inconclusive, the project will continue for an additional 24 months. The demonstration will utilize a randomized design with 13,700 treatment group beneficiaries and an equal number of control group beneficiaries.

Status: An evaluation design and operational protocol were developed by the contractor and approved by the Health Care Financing Administration (HCFA). Site selection was finalized with California, Florida, and New York being selected for participation. HCFA began offering the therapeutic shoe benefit in August 1989.

The Omnibus Budget Reconciliation Act of 1989 (Public Law 101-239) has mandated additional changes in coverage under the demonstration. As of September 30, 1990, 2,156 beneficiaries, 3,583 providers, and 401 suppliers of therapeutic shoes are participating in the demonstration. Because early enrollment rates have been lower than expected, HCFA has implemented an intensive outreach activity designed to increase beneficiary and physician participation. The interim Report to Congress, submitted on September 21, 1990, indicates that the cost effectiveness of the therapeutic shoes cannot be determined based on the existing data and that the demonstration should continue for an additional 2 years. The Division of Research and Demonstrations Systems Support, HCFA, is serving as the carrier for the study.

Access

Analyzing Durations of Spells Without Health Insurance: How Many Types of People Have Chronic Versus Short-Term Spells?

Project No.: 99-C-98526/1
Period: August 1990-July 1991
Funding: $ 102,705
Award: Cooperative Agreement
Awardee: Brandeis University Research Center
(See page 73)
Project Officer: Gerald F. Riley
Division of Beneficiary Studies

Description: This project will analyze the durations of spells without health insurance and the determinants of chronic as well as short uninsured spells. This is a topic of increasingly critical importance as the Nation begins to assess various policy alternatives for providing financial access to the uninsured population. This project will expand and increase the sophistication of research that The Urban Institute has conducted using the 1984 Panel of the Survey of Income and Program Participation (SIPP). The SIPP is a multipanel, longitudinal survey conducted by the U.S. Bureau of the Census.

Status: This project is in the early developmental stage.

Relationships Between Household Income, Health Insurance Status, and Access to Medical Care

Project No.: 99-C-98489/9
Period: September 1990-August 1991
Funding: $ 66,647
Award: Cooperative Agreement
Awardee: The RAND Policy Research Center
(See page 72)
Project Officer: Jeffrey A. Buck
Division of Program Studies

Description: Using the Health Interview Survey, the project will examine the relationships between household income and measures of access to health care among persons with and without health insurance.

Status: This project is in the early developmental stage.

Analysis of the Health Care Financing System

Project No.: 500-89-0023
Period: May 1989-September 1991
Funding: $ 304,686
Award: Contract
Contractor: Lewin/ICF
1090 Vermont Avenue, NW.
Suite 700
Washington, D.C. 20005
Project Officer: Gerald F. Riley
Division of Beneficiary Studies

Description: The purpose of the study is to address the August 1988 Presidential Directive from the AIDS (acquired immunodeficiency syndrome) Commission to conduct an analysis of the health care financing system. The study focuses on the American public's access to adequate health care under the current system of health care financing. Attention is being paid to private and public sector-oriented strategies for insuring low-income populations. This includes various proposed expansions of the Medicaid program as well as mandated employer benefits. Alternatives for the uninsured and underinsured will be developed. The fiscal impacts of these strategies as well as the utility of the strategies for policymaking will be analyzed.

Status: The final report, "The health care financing system and the uninsured," was completed on April 4, 1990, and is available from the National Technical Information Service, accession number PB90-227133. The contract was extended through September 1991 to permit modeling of additional options for covering the uninsured; part of this work will be conducted for the Advisory Council on Social Security.

Racial Variations in Glaucoma Treatment

Funding: Intramural
Project Director: Marshall McBean
Division of Beneficiary Studies

Description: This project is examining treatment rates for open angle glaucoma in elderly Medicare beneficiaries throughout the United States from 1986 through 1988. Although a recent survey conducted in Baltimore, Maryland, indicates that the disease occurs four times more frequently in black persons than in white persons, the rate of treatment is only twice as great in black persons.

Status: A paper is being prepared for publication. The principal author is Dr. Jonathan Javitt, Center for Sight, Georgetown University, Washington, D.C.

Access to Kidney Transplantation: An Examination of the Decision to Transplant

Project No.: 99-C-98489/9
Period: September 1990-September 1991

Funding: $ 112,252
Award: Cooperative Agreement
Awardee: The RAND Policy Research Center
(See page 72)
Project Officer: Paul W. Eggers
Division of Beneficiary Studies

Description: This project will analyze the effect of the medical and social characteristics of both the organ donor and potential transplant recipient on the probability of receiving a kidney transplant. RAND will conduct a comprehensive examination of the medical and nonmedical reasons for placing or not placing a donated cadaver kidney into a particular individual when that individual is next in line to receive a transplant. Specifically, RAND will identify the key factors that determine when an individual will receive a cadaver kidney at kidney transplant centers across the country.

Status: This project is in the early developmental stage.

Maternal and Child Health

Medicaid Extension of Eligibility to Pregnant Women and Children Demonstration: The Florida Medicaid Program and School Enrollment-Based Health Insurance

Project No.: 11-C-99638/4
Period: September 1990-March 1992
Funding: $ 224,989
Award: Cooperative Agreement
Awardee: Florida Department of Health and Rehabilitative Services
1317 Winewood Boulevard
Building 6, Room 271
Tallahassee, Fla. 32399
Project Officer: Robin J. Brocato
Division of Health Services and Special Studies
Mandate: Omnibus Budget Reconciliation Act of 1989
(Public Law 101-239)

Description: As mandated by Section 6407 of Public Law 101-239, this project will extend Medicaid to children 6 through 18 years of age who are from families with incomes less than 130 percent of the Federal poverty level. Low-cost commercial health insurance will be marketed through the Florida school system by means of a nonprofit corporation (i.e., the Healthy Kids Corporation) established by the State to facilitate the provision of preventive health care services to children and to provide comprehensive coverage to children and their families. The insurance package will have both a high (comprehensive) and a low (preventive and primary care only) option plan. The package will be based on Medicaid reimbursement rates and provider networks consisting primarily of pediatricians and family practitioners who currently contract with Medicaid. The State will contract with an insurer to underwrite the insurance.

Status: This project is in the early developmental stage.

Medicaid Extension of Eligibility to Pregnant Women and Children Demonstration: A Demonstration to Expand Health Insurance Coverage to Low-Income Persons Through Medicaid or Private Insurance

Project No.: 11-C-99640/1
Period: September 1990-March 1992
Funding: $ 143,161
Award: Cooperative Agreement
Awardee: Maine Department of Human Services
Bureau of Medical Services
State House
Station No. 1
Augusta, Maine 64333
Project Officer: Rosita McKee
Division of Health Services and Special Studies
Mandate: Omnibus Budget Reconciliation Act of 1989
(Public Law 101-239)

Description: As mandated by Section 6407 of Public Law 101-239, this demonstration will augment the Maine Health Program (MHP) enacted in 1989 and is currently in the final design stage. MHP is a statewide program to extend Medicaid-like benefits for adults up to 95 percent of the Federal poverty level (FPL) and for children below 18 years of age in families with incomes up to 125 percent of the FPL who would otherwise be ineligible for Medicaid benefits (incomes could rise to 185 percent of the FPL before children would be ineligible for the program). Where employer-sponsored health insurance is available, MHP provides "wrap-around" coverage for Medicaid benefits not included in the employer's benefit package. Where no employer-sponsored coverage is available, the eligible worker and dependents will receive the Medicaid package administered by the Medicaid program and paid at Medicaid rates (using only State funds). Under the demonstration, Medicaid Federal matching funds will be used to extend MHP to children through 19 years of age who are from families with incomes less than 125 percent of the FPL (incomes can rise to 185 percent of the FPL while they are in the program). Enrollees may continue in the program for up to 2 years if family income exceeds 125 percent of the FPL but remains below 185 percent of the FPL, as long as they pay a premium (based on household income). The State also plans to extend presumptive eligibility to children, limited to a period of 14 days, for ambulatory care benefits only. For those with employer-sponsored health insurance availability, the State may pay for the employee's share of the premium, deductible, or coinsurance for dependent children, in addition to providing wrap-around coverage for Medicaid benefits not included in the employer's benefit package.

Status: This project is in the early developmental stage.

Medicaid Extension of Eligibility to Pregnant Women and Children Demonstration: Michigan Child Caring Program

Project No.: 11-C-99633/5
Period: September 1990-March 1992
Funding: $ 115,000
Award: Cooperative Agreement
Awardee: Michigan Department of Social Services
400 South Pine Street
Lansing, Mich. 48909
Project Officer: Ruth B. Pickard
Division of Health Services and Special Studies
Mandate: Omnibus Budget Reconciliation Act of 1989
(Public Law 101-239)

Description: As mandated by Section 6407 of Public Law 101-239, this program will extend Medicaid eligibility to children 6 through 18 years of age who are from families with incomes up to 185 percent of the Federal poverty level. Approximately 12,400 are expected to be enrolled in the first year. The demonstration is a private and public partnership between the Michigan Medicaid program and Blue Cross and Blue Shield of Michigan. Blue Cross and Blue Shield will administer the plan and will test the acceptability and impact of a "mainstream" type of insurance package. The proposed benefit package covers most primary and preventive ambulatory services.

Status: This project is in the early developmental stage.

Feasibility Study to Examine the Cost Effectiveness of Medicaid Expansions

Project No.: 99-C-99169/5
Period: August 1990-July 1991
Funding: $ 50,796
Award: Cooperative Agreement
Awardee: University of Minnesota Research Center
(See page 75)
Project Officer: Marilyn B. Hirsch
Division of Program Studies

Description: The purpose of this project is to examine the feasibility and utility of conducting a cost-effectiveness study of the Medicaid expansions. A literature review will be conducted, interventions will be identified, research hypotheses will be evaluated, and research designs will be explored. A panel of experts in the fields of maternal and child health, Medicaid, and cost-effectiveness research will be convened in Spring 1991 to review this preliminary work and to discuss the issues presented. The Health Care Financing Administration will use the results of the meeting to guide future research relating to the cost effectiveness of the expansions.

Status: This project is in the early developmental stage.

Extending Medicaid Coverage of Substance Abuse Treatment to Eligible Pregnant Women: Assessment of Issues and Costs

Project No.: 99-C-98526/1
Period: August 1990-September 1991
Funding: $ 79,533
Award: Cooperative Agreement
Awardee: Brandeis University Research Center
(See page 73)
Project Officer: Marilyn B. Hirsch
Division of Program Studies

Description: The purpose of this project is to study Medicaid's coverage of substance abuse treatment programs and to assess the costs of expanding this treatment to pregnant women at risk of delivering a substance-impaired infant. This project will use primarily data from surveys that have already been conducted, supplemented with data from studies that have already been conducted and data from interviews with State officials working in the areas of Medicaid and substance abuse. Cost estimates for selected States will be developed.

Status: This project is in the early developmental stage.

Damaged Children: Implications for the Medicaid System

Project No.: 99-C-98489/9
Period: August 1990-July 1991
Funding: $ 75,000
Award: Cooperative Agreement
Awardee: The RAND Policy Research Center
(See page 72)
Project Officer: Penelope L. Pine
Division of Program Studies

Description: The purpose of this project is to provide the Health Care Financing Administration with an initial assessment of the effect of high-cost infants and children on Medicaid and to test the feasibility of approaching the problem by means of literature review and analysis of existing data bases. The study will develop a taxonomy of high-cost conditions, based on a synthesis and assessment of available studies on these conditions, and will perform multivariate analysis of high-cost cases (e.g., human immunodeficiency virus, syphilis, and measles); childhood injuries; iatrogenic events to infants or children; malnourished children (i.e., failure to thrive); and childhood lead poisoning.

Status: This project is in the early developmental stage.

Medicaid: Neonatal Intensive Care Unit Costs

Project No.: 99-C-99169/5
Period: August 1990-August 1991
Funding: $ 51,133
Award: Cooperative Agreement
Awardee: University of Minnesota Research Center
(See page 75)

Project Officer: M. Beth Benedict
Division of Program Studies

Description: Neonatal intensive care is a principal reason for the sharp decline in infant mortality over the past 2 decades. This project will develop a paper to examine issues related to collecting data on total neonatal intensive care unit (NICU) costs and Medicaid expenditures for NICUs as a baseline for further work, and to carrying out studies related to specific areas of concern for groups of patients for whom Medicaid has a large funding responsibility. These studies include, but are not limited to, appropriateness of the length of stay in NICUs; early discharge with technology; infants born to women who use drugs during pregnancy; infants who test positive for the human immunodeficiency virus; and decisions to begin life support technology.

Status: This project is in the early developmental stage.

1988 National Maternal and Infant Health Survey

Period: October 1988-September 1991
Award: Interagency Agreement
Agency: Centers for Disease Control
National Center for Health Statistics
Hyattsville, Md. 20782
Project Officer: Marilyn B. Hirsch
Division of Program Studies

Description: This project will interview women who experienced a live birth, an infant death, or a fetal death in 1988. Each woman will be asked about her prenatal care and health habits, delivery, other pregnancies, her characteristics and those of the baby's father, family income, and baby's health. With the woman's permission, prenatal care providers and hospitals will be contacted for additional information. Intramural research at the Health Care Financing Administration (HCFA), a survey cosponsor, will focus on factors related to access, adequacy, and quality of prenatal care; adverse birth outcomes; and adverse delivery outcomes for women on Medicaid compared with those in other insurance categories.

Status: Interviews of the mothers were completed. HCFA received a preliminary data tape with information from the mothers' interviews and vital records. Intramural research is in the developmental stage.

1990 Longitudinal Followup of Mothers in the 1988 National Maternal and Infant Health Survey

Period: October 1989-September 1991
Award: Interagency Agreement
Agency: Centers for Disease Control
National Center for Health Statistics
Hyattsville, Md. 20782
Project Officer: Marilyn B. Hirsch
Division of Program Studies

Description: This project will interview women who participated in the 1988 National Maternal and Infant Health Survey who experienced a live birth and a sample of women surveyed who experienced an infant death or a fetal death. Data on the health and morbidity of the children will be collected from the mothers, the children's medical care providers, and any hospitals in which care was delivered to the children.

Status: This project is in the developmental stage.

Subacute and Long-Term Care

Alternative Payment and Delivery

Evaluation of "Life-Continuum of Care" Residential Centers in the United States

Project No.: 18-C-98672/1
Period: January 1985-September 1989
Funding: $ 832,871
Award: Cooperative Agreement
Awardee: Hebrew Rehabilitation Center for the Aged
1200 Centre Street
Boston, Mass. 02131
Project Officer: Judith A. Sangl
Division of Long-Term Care Experimentation

Description: The objective of this project was to obtain information about the characteristics of continuum of care residential centers (CCRCs) and their residents and to compare these characteristics with respect to quality of life and health, service costs, and utilization with those of elderly residents living in the community. Data were gathered from 20 CCRCs in Arizona, California, Florida, and Pennsylvania. These sites were stratified according to the type of contract offered (extended versus limited), the age of the facility, and the income levels of those enrolled. Three types of CCRC residents were selected from the sites for the study sample—new admissions (580), existing residents, both short- and long-stay residents (1,640), and residents who died just prior to or during the field data gathering period (660). Quality of life and service utilization data were gathered at 2 points in time, at baseline and 12 months later. Three types of comparison samples were employed:

- A representative sample of elderly in their own homes or independent apartments (2,422).
- A national sample of elderly living in congregate housing settings (2,350).
- A representative sample of elderly who have died and for whom retrospective data are available for their last year of life (1,500).

Status: The final report is expected by Summer 1991.

Design, Implementation, and Evaluation of a Prospective Case-Mix System for Nursing Homes in Massachusetts

Project No.: 11-C-98924/1
Period: August 1986-December 1989
Funding: $ 362,312

Award: Cooperative Agreement
Awardee: Massachusetts Department of Public Welfare
Medical Assistance Division
600 Washington Street
Boston, Mass. 02116
Project Officer: Dana B. Burley
Division of Long-Term Care Experimentation

Description: This project designed and implemented a prospective case-mix system for a random sample of nursing homes in Massachusetts. This payment system tested incentives for these nursing homes to admit and treat heavy-care patients while minimizing declines in quality of care. Experimental facilities were compared with facilities that continue to be reimbursed under the present system. Thirty-one homes participated, 17 in the experimental group. The system modifies 4 of 7 components of the nursing home reimbursement system currently used in the State. For demonstration facilities, nursing services payment is case-mix adjusted using "management minutes." Incentives to admit and treat heavy-care patients were used to further modify the nursing cost center. Various financial incentives also were used to reduce other controllable operating costs.

Status: During the first 2 years of the cooperative agreement, project staff finalized aspects of the proposed payment system, assigned volunteer nursing homes to the experimental and control groups, and improved the nursing homes' quality assurance mechanisms. Implementation of the case-mix system began on October 3, 1988, for 1 experimental year. Development of quality assurance indicators using this case-mix data base occurred during the implementation year. The demonstration ended December 31, 1989. Evaluation of the demonstration began in January 1990. A final report is expected in late 1990.

Texas Nursing Home Case-Mix Demonstration

Project No.: 11-C-99131/6
Period: September 1987-June 1992
Funding: $ 532,830
Award: Cooperative Agreement
Awardee: State of Texas Department of Human Services
P.O. Box 149030 (MC-E-601)
Austin, Tex. 78769
Project Officer: Elizabeth S. Cornelius
Division of Long-Term Care Experimentation

Description: The Texas Department of Human Services will conduct a 3-year demonstration to implement and evaluate a Medicare/Medicaid prospective case-mix payment system. The payment system will be based on the Health Care Financing Administration (HCFA)-sponsored feasibility studies. The major Medicaid objectives of the project are to:

- Match payment rates to resident need.
- Promote the admission of heavy-care patients to nursing homes.
- Provide incentives to improve quality of care.
- Improve management practices.
- Demonstrate administrative feasibility of the new system.

The objective for Medicare is to develop and pilot test administrative processes for implementing a Medicare prospective payment system based on a resource utilization group (RUG) system in coordination with Medicaid case-mix systems. Texas will use a quasi-experimental design for the Medicare pilot test to compare the effect of introducing case-mix payment in an experimental catchment area versus continuing the flat rate, cost-based system in a control catchment area. The State will use a pre-post design for the Medicaid system. The case-mix classifications are based on a review of 6 different systems in which the New York RUGs II explained the greatest variance of staff time. The case-mix indexes borrow major elements of the RUGs II system and some of the rationale from the Minnesota system. The Texas index of level of effort (TILE) uses 4 clinical groups to form clusters and develops subgroups using an activities of daily living (ADL) scale. The index that will be used for the classification of Medicare patients is the RUG-T18, which uses the same clinical groups and ADL scale used in the New York RUGs II system. The difference occurs in the expanded rehabilitation groups for Medicare patients. Two third-party evaluations—one of data reliability and a second of the validity of the data analysis methods—will be used.

Status: During the first year, the TILE and RUG-T18 indexes were reviewed for compatibility. The RUG-T18 classification was placed into operation to match the HCFA Medicare coverage guidelines effective April 1988. Cost analyses of both national and State samples of Medicare providers were performed to arrive at baseline costs for calculating the rates for the RUG-T18 groups. The Texas client assessment, review, and evaluation instrument has been reviewed and revised. The new national minimum data set (MDS) was tested on 900 residents, and the interrater reliability was found to be very good between the 2 instruments on similar items. The MDS will be used for Medicare classification. In the Medicare pilot, each week a nurse will review new admissions onsite to classify residents into the RUG-T18 groups and to give prior authorization of the Medicare stays for specific time intervals. The Medicaid payment system became operational in April 1989. Medicare waivers are being processed and the demonstration is scheduled for operation in 1991.

Analysis of Long-Term Care Payment Systems

Project No.: 18-C-98306/8
Period: April 1983-December 1988
Funding: $ 1,394,293
Award: Cooperative Agreement

Awardee: Center for Health Services Research
University of Colorado
1355 South Colorado Boulevard, Suite 706
Denver, Colo. 80222
Project Officer: Judith A. Sangl
Division of Long-Term Care Experimentation

Description: This project was a comparative analysis of long-term care reimbursement systems in seven States (Colorado, Florida, Maryland, Ohio, Texas, Utah, and West Virginia). The study combined an empirical analysis of nursing home costs and payments and the determinants of costs with a detailed qualitative analysis of the operations of the reimbursement systems. The comparative analysis across States was performed through a unique comparison-by-substitution method that calculated reimbursement for nursing homes in one State under the assumption that the other States' reimbursement systems were in effect. Data sources for this study included primary facility information and patient samples, as well as secondary sources such as cost reports.

Status: The final report has been received and will be sent to the National Technical Information Service. The final report consists of three volumes:

- Volume I: A Multi-State Analysis of Medicaid Nursing Home Payment Systems.
- Volume II: Administering Nursing Home Case-Mix Reimbursement Systems: Issues of Assessment, Quality, Access, Equity and Cost.
- Volume III: Analyzing Nursing Home Capital Reimbursement Systems.

Additional reports are available from the University of Colorado:

- "Case-Mix Measures and Medicaid Nursing Home Payment-Rate Determination in West Virginia, Ohio, and Maryland," March 1984.
- "Overview of Medicaid Nursing Home Reimbursement Systems," March 1984.
- "Case-Mix and Capital Innovations in Nursing Home Reimbursement," August 1984.
- "An Analysis of Long-Term Care Payment Systems: Research Design," October 1984.
- "The Long-Term Care Policy Environment in Seven States," May 1985.
- "Medicaid and Non-Medicaid Case-Mix Differences in Colorado Nursing Homes," September 1985.
- "Case-Mix Reimbursement for Nursing Home Services: A Three-State Simulation Model," October 1985.
- "Case Mix in Connecticut Nursing Homes: Medicaid Versus Non-Medicaid, Profit Versus Non-Profit, and Urban Versus Rural Patient Groups," December 1985.
- "Analyzing Nursing Home Profits," May 1986.
- "Case-Mix Reimbursement for Colorado Nursing Homes."

Modifications of the Texas System of Care for the Elderly: Alternatives to the Institutionalized Aged

Project No.: 11-P-97473/6
Period: January 1980-June 1991
Award: Grant
Grantee: Texas Department of Human Resources
701 West 51st Street
P.O. Box 2960
Austin, Tex. 78769
Project Officer: Phyllis A. Nagy
Division of Long-Term Care Experimentation
Mandate: Consolidated Omnibus Budget Reconciliation Act of 1985
(Public Law 99-272)

Description: The purpose of this project is to reduce the growth of nursing homes in Texas and, at the same time, expand access to community care services for needy Medicaid individuals. This objective is being accomplished by directly changing the operating policies of Texas' Title XIX and Title XX programs, specifically by eliminating the State's lowest level of institutional care, intermediate care facility II (ICF-II). Existing organizations responsible for the State's Title XIX and Title XX programs are responsible for project implementation.

Status: Substantial progress has been made in achieving project objectives. In March 1980, there were 15,486 individuals in the ICF-II group. As of December 1988, 506 ICF-II clients remained. From March 1980 to December 1988, the total institutional population decreased from 64,820 to 54,365 clients (a reduction of 16.1 percent), while the community care population increased from 30,792 to 46,958 (an increase of 52.5 percent). A final report is expected in September 1991.

New Jersey Respite Care Pilot Project

Project No.: 11-P-99333/2
Period: July 1988-September 1992
Award: Grant
Grantee: New Jersey Department of Human Services
222 South Warren Street
Trenton, N.J. 08625
Project Officer: Dennis M. Nugent
Division of Long-Term Care Experimentation
Mandates: Omnibus Budget Reconciliation Act of 1986
(Public Law 99-509)
Omnibus Budget Reconciliation Act of 1987
(Public Law 100-203)

Description: For many families, caring for an elderly or chronically disabled member can be both physically and

emotionally demanding. Respite care provides temporary relief to caregivers, allowing them to continue in that role for a longer period of time. A provision in Public Law 99-509 established the New Jersey Respite Care Pilot Project to assist families with the care of elderly or functionally impaired individuals at risk of being placed in institutions. This project was developed to examine the effect of respite services on both caregivers and care recipients. The purpose of the study is to determine to what extent respite care services enhance or sustain the role of the family in providing long-term care and whether these services postpone or avert the need for institutional placement. Respite care services under this project include homemaker, home health aide, and personal care services; short-term and intermittent companion services; adult day care; and inpatient respite in a hospital or nursing home. Peer support, training, and counseling are also provided to family caregivers.

Status: New Jersey did not submit an application after the passage of the 1986 authorizing legislation because a provision requiring all clients to be Medicaid-eligible was inconsistent with the State's implementation plan. Under the program originally developed by the State, respite care services were to be provided to a non-Medicaid population whose individual income was less than 300 percent of the income level for eligibility for Supplemental Security Income. Since the legislation had failed to include this category of individuals, the State was unable to proceed with the study. Section 4118 of Public Law 100-203 amended the project's eligibility criteria by eliminating the Medicaid requirement. The project began on July 1, 1988. All of New Jersey's 21 counties are participating in this program. During the first 2 years, respite care services were provided to more than 2,000 elderly or disabled clients and their families. In compliance with 1 of the requirements of the legislation, the State has arranged for an independent evaluation of the project to be conducted by the Institute for Health, Health Care Policy, and Aging Research at Rutgers University. The project is scheduled to end in September 1992.

Study of Adult Daycare Services

Project No.: 500-89-0024
Period: June 1989-January 1990
Funding: $ 93,750
Award: Contract
Contractor: Institute for Health and Aging
University of California, San Francisco
3733 California Street
San Francisco, Calif. 94143
Project Officer: J. Donald Sherwood
Division of Long-Term Care Experimentation

Description: The purpose of this survey of adult day centers was to provide updated information on:

- Who the adult day centers serve.
- The number of centers there are and their location.
- The services the centers provide.
- The characteristics of operating these centers.
- Who funds these centers.
- The cost of operating these centers.
- Licensing, certification, and quality assurance standards governing these centers.
- How these characteristics vary by State.

Status: Funding for the survey was obtained from the American Association for Retired Persons. All the known and designated adult day centers in the United States (over 2,100) were mailed a survey during February 1989. Responses were received from 1,425 centers in 49 States providing information on organizational structure, licensing and certification, client characteristics, operating time and attendance, services provided, staffing, program costs, and revenue. A contract was awarded to the University of California at San Francisco to perform the analyses of the survey data. The study found that most centers are nonprofit organizations. The service package available in adult day centers varies, but most centers include recreational therapy; meals and transportation; social work; nursing; personal care; and medical assessment. Clients are predominantly older persons who are physically and/or cognitively impaired. The average program enrollment was 37 and daily attendance was fewer than 20. The daily operating cost in 1989 was $36, with over half of the centers operating at a deficit. Medicaid was the largest funding source of adult daycare. A draft final report on the analysis has been received and is being revised. The report is expected to be available by the end of 1990. With the repeal of the Medicare Catastrophic Coverage Act of 1988, this project is no longer congressionally mandated.

On Lok's Risk-Based Community Care Organization for Dependent Adults

Project Nos.: 95-P-98246/9; 11-P-98334/9
Period: November 1983-Indefinite
Award: Grants
Grantees: On Lok Senior Health Services
1441 Powell Street
San Francisco, Calif. 94133
California Department of Health Services
714-744 P Street
Sacramento, Calif. 95814
Project Officer: J. Donald Sherwood
Division of Long-Term Care Experimentation
Mandates: Social Security Amendments of 1983 (Public Law 98-21)
Consolidated Omnibus Budget Reconciliation Act of 1985 (Public Law 99-272)

Description: As mandated by Sections 603(c)(1) and (2) of Public Law 98-21, the Health Care Financing Administration granted Medicare waivers to On Lok Senior Health Services and Medicaid waivers to the California Department of Health Services. Together, these waivers permitted On Lok to implement an at-risk, capitated payment demonstration in which more than

300 frail elderly persons, certified by the California Department of Health Services for institutionalization in a skilled nursing facility, are provided a comprehensive array of health and health-related services in the community. The current demonstration maintains On Lok's comprehensive community-based program but has modified its financial base and reimbursement mechanism. All services are paid for by a predetermined capitated rate from both Medicare and Medicaid (Medi-Cal). The Medicare rate is based on the average per capita cost for the San Francisco county Medicare population. The Medi-Cal rate is based on the State's computation of current costs for similar Medi-Cal recipients using the formula for prepaid health plans. Individual participants may be required to make copayments, spend-down income, or divest assets based on their financial status and eligibility for either or both programs. On Lok has accepted total risk beyond the capitated rates of both Medicare and Medi-Cal with the exception of the Medicare payment for end stage renal disease. The demonstration provides service funding only under the waivers. The research and development activities are funded through private foundations.

Status: Section 9220 of Public Law 99-272 has extended On Lok's Risk-Based Community Care Organization for Dependent Adults indefinitely, subject to the terms and conditions in effect as of July 1, 1985, except that requirements relating to data collection and evaluation do not apply.

Program for All-Inclusive Care for the Elderly (On Lok) Case Study

Project No.: 99-C-99169/5
Period: August 1989-January 1991
Funding: $ 172,138
Award: Cooperative Agreement
Awardee: University of Minnesota Policy Center
(See page 75)
Project Officer: Nancy A. Miller
Division of Long-Term Care Experimentation
Mandate: Omnibus Budget Reconciliation Act of 1986
(Public Law 99-509)

Description: This study will provide a descriptive analysis of the early stages of the Program for All-Inclusive Care for the Elderly (PACE) demonstration. The study will examine in detail the model of service delivery provided by On Lok Senior Health Services, San Francisco, California, and the degree to which aspects of this model are successfully replicated in as many as eight sites nationwide. The results are expected to have utility as subsequent sites are developed for later implementation.

Status: Initial visits to On Lok and PACE sites have been completed and an interim report has been submitted. A second round of site visits is planned for 1991.

Evaluation of the Suitability of Nonrandom Designs for the Program for All-Inclusive Care for the Elderly

Project No.: 99-C-99169/5
Period: July 1990-September 1990
Funding: $ 14,494
Award: Cooperative Agreement
Awardee: University of Minnesota Research Center
(See page 75)
Project Officer: Nancy A. Miller
Division of Long-Term Care Experimentation

Description: The purpose of this project was to evaluate the suitability of nonrandom designs for evaluating the Program for All-Inclusive Care for the Elderly (PACE) demonstration. The study was to assess the adequacy of selectivity bias models in general for compensating for potential selection bias in evaluations and to provide specific suggestions to strengthen the proposed PACE evaluation design in which a selectivity bias model was used.

Status: This project is completed. The final report has been received in the Office of Research and Demonstrations. Findings showed that use of a selectivity bias in lieu of random assignment to treatment and control groups could control for selection bias in the PACE evaluation, provided that careful attention is given to several methodological issues that are described in the report. The authors especially emphasized the importance of identification of the outcome equation in a selectivity bias model.

Frail Elderly Demonstration: The Program for All-Inclusive Care for the Elderly

Period: June 1990-October 1993
Award: Grant
Project Officer: Nancy A. Miller
Division of Long-Term Care Experimentation
Mandate: Omnibus Budget Reconciliation Act of 1986
(Public Law 99-509)

Description: As mandated by Public Law 99-509, the Health Care Financing Administration will conduct a demonstration which replicates, in not more than 10 sites, the model of care developed by On Lok Senior Health Services in San Francisco, California. The Program for All-Inclusive Care for the Elderly (PACE) demonstration replicates a unique model of managed-care service delivery for 300 to 500 very frail community-dwelling elderly, most of whom are dually eligible for Medicare and Medicaid coverage and all of whom are assessed as being eligible for nursing home placement according to the standards established by participating States. The model of care includes as core services the provision of adult day health care and multidisciplinary case management through which access and allocation of all health and long-term care

services are arranged. Physician, therapeutic, ancillary, and social support services are provided onsite at the adult day health center whenever possible. Hospital, nursing home, home health, and other specialized services are provided extramurally. Transportation is also provided to all enrolled members who require it. This model is financed through prospective capitation of both Medicare and Medicaid payments to the provider. Demonstration sites are to assume financial risk progressively over 3 years, as stipulated in the Omnibus Budget Reconciliation Act of 1987. The 5 sites and their State Medicaid agencies that have been granted waiver approval to provide services are:

Elder Service Plan
Project No.: 95-P-99357/1
Period: October 1989-May 1993
Grantee: East Boston Geriatric Services, Inc.
10 Grove Street
East Boston, Mass. 02128

Project No.: 11-P-99356/1
Period: October 1989-May 1993
Grantee: Massachusetts State Department of Public Welfare
180 Tremont Street
Boston, Mass. 02111

Providence ElderPlace
Project No.: 95-P-99359/0
Period: October 1989-May 1993
Grantee: Providence Medical Center
4805 Northeast Glisan Street
Portland, Ore. 97213

Project No.: 11-P-99358/0
Period: October 1989-May 1993
Grantee: Oregon State Department of Human Resources
313 Public Service Building
Salem, Ore. 97310

Comprehensive Care Management
Project No.: 95-P-99361/2
Period: October 1989-August 1993
Grantee: Beth Abraham Hospital
612 Allerton Avenue
Bronx, N.Y. 10467

Project No.: 11-P-99360/2
Period: October 1989-August 1993
Grantee: New York State Department of Social Services
40 North Pearl Street
Albany, N.Y. 12243

Palmetto SeniorCare
Project No.: 95-P-99630/4
Period: August 1990-September 1993
Grantee: Richland Memorial Hospital
Five Richland Medical Park
Columbia, S.C. 29203

Project No.: 11-P-99629/4
Period: August 1990-September 1993
Grantee: South Carolina State Health and Human Services Finance Commission
P.O. Box 8206
Columbia, S.C. 29202

Community Care for the Elderly
Project No.: 95-P-99628/5
Period: August 1990-October 1993
Grantee: Community Care Organization of Milwaukee County, Inc.
1845 North Farwell Avenue
Milwaukee, Wis. 53202

Project No.: 11-P-99627/5
Period: August 1990-October 1993
Grantee: Wisconsin State Department of Health and Social Services
P.O. Box 7850
Madison, Wis. 53707

Status: Up to 5 additional sites will be phased in over the next 2 years. A contract to evaluate the PACE demonstration will be awarded in fiscal year 1991.

Capitation Reimbursement for Frail Elderly

Project No.: 99-C-98526/1
Period: August 1988-July 1990
Funding: $ 74,392
Award: Cooperative Agreement
Awardee: Brandeis University Research Center
(See page 73)
Project Officer: William D. Clark
Division of Long-Term Care Experimentation

Mandate: Omnibus Budget Reconciliation Act of 1986
(Public Law 99-509)

Description: This project involved examining data on Medicaid nursing home certifiable beneficiaries as a means to analyze and refine the capitated reimbursement methodology being implemented in the congressionally mandated Program for All-Inclusive Care for the Elderly (PACE) demonstration. The PACE demonstration attempted to replicate the model developed by On Lok Senior Health Services in San Francisco, California.

Status: A draft final report, "Capitation Rates for the Frail Elderly," has been received and is still under review. The report provides an analysis of the Medicare capitation rate factors used by On Lok and the PACE sites. The analysis was based on data obtained from the Social Health Maintenance Organization demonstration and the National Long-Term Care Surveys for 1982 and 1984.

Bundling of Acute and Post-Acute Care Service

Project No.: 99-C-99169/5
Period: September 1990-February 1991
Funding: $ 49,505
Award: Cooperative Agreement
Awardee: University of Minnesota Research Center
(See page 75)
Project Officer: Dennis M. Nugent
Division of Long-Term Care Experimentation

Description: This project will examine the concept of bundling payment for acute and post-acute care services into payment for an episode of care. The Health Care Financing Administration is interested in developing alternative approaches that would encourage organizations to manage an entire episode of care under a payment arrangement other than the present fee-for-service system. The University of Minnesota will prepare a report on the feasibility of different design options. After this draft report is prepared, a technical advisory panel will be convened to review it. The draft report and panel comments and recommendations will then be synthesized into a final report. This project is in the early developmental stage.

Status: The final report is expected in February 1991.

Arizona Health Care Cost-Containment System

Project No.: 11-P-98239/9
Period: June 1982-September 1993
Award: Grant
Grantee: Arizona Health Care
Cost-Containment System Administration
801 East Jefferson
Phoenix, Ariz. 85034
Project Officer: Sidney Trieger
Division of Health Systems and Special Studies

Description: This project is designed to test the effectiveness of establishing, under Title XIX of the Social Security Act, a Medicaid program based on competitive principles, including primary care physicians acting as gatekeepers, prepaid capitated contracts, competitive bidding, use of nominal copayments, limited restrictions on freedom of choice, and capitated payment by the Health Care Financing Administration. Although acute services continue to be provided by health plans, long-term care (LTC) services are provided through capitated contracts by the State with the two largest Arizona counties and two LTC contractors. The major features of the Arizona Long-Term Care System (ALTCS) are:

- County and State governments share the burden for financing the non-Federal portion of the program.
- The State is at limited financial risk for services provided to the developmentally disabled (DD).
- Program contractors are at financial risk for providing services through prepaid capitation payments made by the State.
- Prevention of member dumping and promotion of cost effectiveness are accomplished by bundling LTC and acute care services into one capitation rate.
- Clients at risk of being institutionalized are treated in the least restrictive, most cost-effective manner by providing them with a full continuum of LTC services from skilled nursing home care to home care. Home and community-based expenditures cannot exceed 18 percent of total LTC eligibles for the elderly and physically disabled population. There is no such limit for the DD population.
- LTC services are procured through competitive bidding and selective contracting.
- Strong program controls are employed, including a stringent preadmission screening program, case management, quality assurance, quality control, uniform accounting and reporting, and auditing.

Status: The Arizona Health Care Cost-Containment System (AHCCCS) began operation on October 1, 1982, and initially only covered acute care services. The ALTCS component was approved as part of a 5-year extension of the AHCCCS demonstration from October 1, 1988 through September 30, 1993, and has completed its second year of operation.

Evaluation of the Arizona Health Care Cost-Containment System

Project No.: 500-89-0067
Period: September 1989-September 1994
Funding: $ 3,299,119
Award: Contract
Contractor: Laguna Research Associates
1803 Laguna Street
San Francisco, Calif. 94115
Project Officer: Ronald W. Lambert
Division of Health Systems and Special Studies

Description: This project will evaluate the continuing operation of the Arizona Health Care Cost-Containment System (AHCCCS), with particular emphasis on the implementation and operation of the Arizona Long-Term Care System (ALTCS), a new component of AHCCCS which began in December 1988. AHCCCS is a unique, State-sponsored capitation demonstration that provides public assistance medical care to residents of Arizona who are eligible for Aid to Families with Dependent Children and Supplemental Security Income cash payments. Major research questions to be investigated include:

- Does combining long-term care (LTC) and acute care services into one payment to local program contractors result in improved LTC and reduce acute care services?
- Does competitive bidding and selective contracting result in lower per unit LTC service cost?
- How effective is the preadmission screening (PAS) instrument used by ALTCS in identifying individuals who are at risk of being institutionalized?
- Can home and community-based (HCB) services be substituted for long-term institutional care for

individuals who pass PAS, and are those HCB services less expensive than institutional care?
- Does case management of LTC services result in lower cost and better coordination of care?
- What are the effects of capitating LTC services?
- Is the ALTCS more cost effective than a comparable State's fee-for-service LTC program?

Status: This evaluation is beginning its second year. The first report, which addresses implementation and operation issues, will be available in November 1990. The first outcome report is expected in December 1990.

Feasibility Analysis for Pathways to Long-Term Care Project

Project No.: 99-C-98526/1
Period: August 1989-November 1989
Funding: $ 19,994
Award: Cooperative Agreement
Awardee: Brandeis University Policy Center
(See page 73)
Project Officer: Nancy A. Miller
Division of Long-Term Care Experimentation

Description: The purpose of this study was to determine the feasibility of analyzing social health maintenance organization data on service use that tracks individuals as they make a transition from a state of health to one of severe impairment. If sufficient data is available, subsequent analysis may be approved with additional funds to determine whether definable pathways could be derived. These pathways to long-term care (LTC) could assist in case management practice and could provide outcome-related information regarding the use of LTC services in managed-care settings.

Status: The feasibility study was completed. The available data did not appear sufficient to support additional analysis.

Policy Study of the Cost Effectiveness of Institutional Subacute Care Alternatives and Services: 1984-92

Project No.: 18-C-99491/8
Period: May 1990-April 1994
Funding: $ 1,370,000
Award: Cooperative Agreement
Awardee: University of Colorado
Health Sciences Center
4200 East 9th Avenue, Box C-241
Denver, Colo. 80262
Project Officer: Marni J. Hall
Division of Long-Term Care Experimentation

Description: The University of Colorado will assess which subacute institutional settings and combinations of services are most cost effective and provide more positive outcomes for various types of patients. The project will identify potential Health Care Financing Administration (HCFA) policy changes that might encourage use of the most appropriate settings and services. This 4-year project will use primary and secondary data from three previous HCFA-sponsored studies to compare quality, cost effectiveness, case mix, service mix, and utilization among institutional subacute care alternatives (e.g., skilled nursing facilities, swing bed hospitals, and rehabilitation hospitals) within and between two time periods—1984-87 and 1990-92. This methodology is designed to determine the most cost-effective combinations of services and provider settings for different types of patients requiring subacute care—for stroke, hip fracture, ventilator dependent, and congestive heart failure.

Status: This project is in the design stage. Preparation for sample selection is under way.

Home Health Agency Prospective Payment Demonstration

Project No.: 500-84-0021
Period: December 1983-March 1990
Funding: $ 2,580,005
Award: Contract
Contractor: Abt Associates, Inc.
55 Wheeler Street
Cambridge, Mass. 02138
Project Officer: Marilyn J. Vranas
Division of Long-Term Care Experimentation
Mandate: Omnibus Budget Reconciliation Act of 1987
(Public Law 100-203)

Description: The purpose of this contract was to develop a demonstration to test alternative methods of paying home health agencies (HHAs) on a prospective basis for services furnished under the Medicare program. The demonstration would enable the Health Care Financing Administration (HCFA) to evaluate the effects of various methods of prospective payment on health care expenditures, quality of home health care, and HHA operations.

Status: Abt Associates was awarded a contract in December 1983 to develop and implement the demonstration, but the demonstration originally developed under this contract was not implemented. In response to Section 4027 of Public Law 100-203, which directs HCFA to conduct a demonstration of prospective payment for HHAs, the contract was modified to provide for additional developmental work and to prepare an updated project design. The demonstration design calls for the testing of 2 prospective payment approaches—payments per visit by type of clinical discipline and payments per episode of Medicare-covered home health care. Each HHA's payment rate will be based on its own Medicare allowable costs in the 12-month period before the HHA entered the demonstration. Implementation of the per visit payment method will begin in October 1990. The implementation of the per episode method is scheduled to begin in 1992. The study design calls for recruitment of 67 HHAs from California, Florida, Illinois, Massachusetts, and Texas in

the first phase of the demonstration and an additional 66 HHAs to participate in the second phase beginning in 1992. In both phases, HHAs' participation is voluntary, and those that agree to participate will be randomly assigned to either the prospective payment method or to a control group that continues to be reimbursed in accordance with the current retrospective cost system. To assure that the incentives of prospective payment do not lead to reductions in the quality of home health care or in access to necessary and appropriate services, peer review organizations in the 5 demonstration States will conduct ongoing quality assurance reviews of a sample of patient records from the participating HHAs. The contract ended in March 1990. In response to Section 4027 of Public Law 100-203, a new contract, number 500-90-0024, was awarded to Abt Associates in July 1990 to implement and monitor the demonstration.

Implementation of Home Health Agency Prospective Payment Demonstration

Project No.:	500-90-0024
Period:	June 1990-June 1995
Funding:	$ 1,629,606
Award:	Contract
Contractor:	Abt Associates, Inc. 55 Wheeler Street Cambridge, Mass. 02138
Project Officer:	Marilyn J. Vranas Division of Long-Term Care Experimentation
Mandate:	Omnibus Budget Reconciliation Act of 1987 (Public Law 100-203)

Description: This contract involves implementation and monitoring of the demonstration developed by Abt Associates under contract number 500-84-0021. This project will implement a demonstration testing alternative methods of paying home health agencies (HHAs) on a prospective basis for services furnished under the Medicare program. This demonstration will test 2 prospective payment approaches—payments per visit by type of discipline and payments per episode of Medicare-covered home health care.

Status: Abt Associates in June 1990 began recruiting HHAs to participate in the demonstration's first phase. This phase involving the per visit payment method begins operation on October 1, 1990. Recruitment of HHAs to voluntarily participate in this phase will continue through June 30, 1991. HHAs that agree to participate will enter the demonstration at the beginning of their next fiscal year. Implementation of the second phase involving the per episode payment method is scheduled to begin in 1992. The study design calls for recruiting in Phase I 67 HHAs from California, Florida, Illinois, Massachusetts, and Texas and an additional 66 HHAs to participate in Phase II beginning in 1992. In each phase, HHAs that agree to participate are randomly assigned to either the prospective payment method or to a control group that continues to be reimbursed in accordance with the Medicare current retrospective cost system.

Evaluation of the Home Health Prospective Payment Demonstration

Project No.:	500-90-0047
Period:	September 1990-September 1995
Funding:	$ 2,858,676 (Phase I)
Award:	Contract
Contractor:	Mathematica Policy Research, Inc. P.O. Box 2393 Princeton, N.J. 08543-2393
Project Officer:	Tony F. Hausner Division of Long-Term Care Experimentation
Mandate:	Omnibus Budget Reconciliation Act of 1987 (Public Law 100-203)

Description: The purpose of this contract is to evaluate Phase I of a demonstration designed to test the effectiveness of using a prospective payment method to reimburse Medicare-certified home health agencies (HHAs) for services provided under the Medicare program. In Phase I, a per visit payment method which sets a separate payment rate for each of six types of home health visits (i.e., skilled nursing, home health aide, physical therapy, occupational therapy, speech therapy, and medical social services) will be tested. Mathematica Policy Research will evaluate the effects of this payment method on HHAs' operations, quality of services HHAs deliver to Medicare beneficiaries, and Medicare expenditures. The contractor will also analyze the relationship between patient characteristics and the cost and use of HHA services in order to develop improved methodologies for adjusting prospective payment rates for case-mix variations.

Status: The demonstration begins operation on October 1, 1990. The evaluation effort is in the early developmental stage.

Develop and Demonstrate a Method for Classifying Home Health Patients to Predict Resource Requirements and to Measure Outcomes

Project No.:	18-C-98983/3
Period:	June 1987-December 1990
Funding:	$ 968,332
Award:	Cooperative Agreement
Awardee:	Georgetown University Georgetown School of Nursing 3700 Reservoir Road, NW. Washington, D.C. 20007
Project Officer:	Margaret A. Coopey Division of Long-Term Care Experimentation

Description: The purpose of this project is to develop a method for classifying patients that will predict resource requirements and measure outcomes of Medicare

patients in certified home health agencies (HHAs). Data on 73 dependent variables were collected from the home health records of approximately 9,000 recently discharged Medicare patients drawn from a national sample of approximately 650 certified HHAs, stratified by size, ownership, and geographic location. The data are being analyzed, using multivariate statistical techniques to determine which variables are most predictive of resource requirements. The identified relevant variables will be incorporated into a classification method with an assessment tool that categorizes patients according to predicted resource requirements. A data base of participating HHAs and the characteristics of their Medicare patients will be created.

Status: The final report is expected in early 1991.

Long-Term Care Populations

Long-Term Care of Aged Individuals With Hip Fractures: Public Versus Private Costs

Project No.: 18-C-98393/3
Period: September 1983-September 1988
Funding: $ 711,793
Award: Cooperative Agreement
Awardee: University of Maryland Medical School
655 West Baltimore Street
Baltimore, Md. 21201
Project Officer: Judith A. Sangl
Division of Long-Term Care Experimentation

Description: This study examined the complex economic and psychosocial determinants of the public and private contribution to the long-term care of a group of aged individuals who suddenly became disabled by hip fractures. The impacts of family size and composition, social support, family economic resources, and the aged individuals' physical and mental health were analyzed in terms of the decisions to enter a nursing home or return home. Study data came from 858 patients from 7 hospitals in the Baltimore, Maryland, area.

Status: Major study findings include:

- *Use of nursing home care.* Patients admitted to nursing homes after being discharged from the hospital for a hip fracture tended to come from households with a larger portion of members who were working, be male, and have claimed poor or fair health; be protestant, older, and white; come from higher income families; have a poor capacity to perform instrumental activities of daily living; live in residences with stairs to climb; and receive less caretaking from family members and friends during the 2 months following hospital discharge.
- *Use of paid home care aides.* Patients who used the services of paid home care providers were more likely to be better educated, have more disposable monthly incomes, live alone, and have many sisters and daughters who headed large households and who resided within 5 miles of the patients' residences. Prior to the fracture, patients receiving assistance from paid home aides tended to get support, including emotional support, for a wide range of activities; e.g., indoor and outdoor mobility, arrangements for services, and medical supervision. After the fracture, the range of supported activities narrowed. The activities receiving the greatest support were personal and domestic care needs and physical therapy.
- *Substitutability of nursing home care, caregiving, and paid home aides.* Patients who relied more on caregiving and paid assistance tended to have substantially shorter nursing home stays. On average, during the 2 months following patients' discharges from the hospital, patients who received an additional 12 minutes per week of caregiving time or an additional 7 minutes per week of paid assistance spent 1 less day in a nursing home during the 2 months following discharge.
- *Financial support.* Prior to the fracture, most patients received modest financial support from family and friends to help pay the cost of medical care services. This support dramatically increased during the 2 months following patients' discharges from the hospital. However, this support returned to pre-fracture levels within 6 months following hospital discharge. For example, families and friends contributed a modest 2 percent to the cost of paid home aides prior to the fracture. Actual dollar support increased dramatically by sixfold during the 2 months following patients' discharges from the hospital, then returned to pre-fracture levels after 6 months. After the fracture, family and friends contributed a modest 5 percent of the costs for nursing home care at 2 months and 2 percent after 6 months following patients' discharges from the hospital.

Massachusetts Health Care Panel Study of Elderly: Wave IV

Project No.: 18-C-98592/1
Period: July 1984-January 1990
Funding: $ 152,408
Award: Cooperative Agreement
Awardee: Harvard University
Harvard Medical School
1350 Massachusetts Avenue
Holyoke Center 458
Cambridge, Mass. 02138
Project Officer: Marni J. Hall
Division of Long-Term Care Experimentation

Description: This project collected the fourth wave of self-reported information from the Massachusetts Health Care Panel Study cohort, a group that was selected 10 years ago as a statewide probability sample of all persons 65 years of age or over. In this project, data from all 4 waves were analyzed to determine markers of functional decline during pre-death; predictors of long-term care institutionalization; and interrelationships among physical, behavioral, and social characteristics;

and subsequent health care and social service utilization and mortality. Of the original 1,625 elderly respondents, 540 persons living in the community participated in this fourth phase of the study.

Status: The final report, "The Massachusetts Health Care Panel Study Wave Four Prevalence Findings for People Aged 75 or Over," is available from the National Technical Information Service, accession number PB90-260043. Information is presented on respondents' demographic characteristics, limitations in performing activities of daily living and instrumental activities of daily living, respondents' present and past health problems, mental health status, medical and dental care utilization and expenditures, receipt of social services, informal supports, financial situation, health insurance coverage, and potential risk factors to good health. Included in the appendix is a summary of published findings based on data from this study. Findings indicate that the percentage of respondents reporting limitations in critical areas was relatively small, but those individuals reporting limitations were at greatly increased risk of negative outcomes and/or increased utilization of health and social services.

A National and Cross-National Study of Long-Term Care Populations

Project No.: 18-C-98641/4
Period: September 1984-December 1990
Funding: $ 1,016,587
Award: Cooperative Agreement
Awardee: Duke University
Center for Demographic Studies
2117 Campus Drive
Durham, N.C. 27706
Project Officer: Herbert A. Silverman
Division of Program Studies

Description: Based on data from the 1982 and 1984 National Long-Term Care Surveys (NLTCSs), this project will forecast the size and the socioeconomic characteristics, health status, and cognitive and physical functioning capacities of the aged population in the United States into the middle of the 21st century. These projections are being compared with similar information from other countries. The findings will be useful for planning long-term care (LTC) programs for functionally impaired aged persons. The project has been expanded to conduct additional analyses on:

- Identifying clusters of characteristics that distinguish groups of functionally impaired aged persons living in the community and that are associated with differential patterns of use and expenditures of home health care services.
- Comparing hospital and post-hospital experiences of persons in the 1982 and 1984 NLTCSs and relating these experiences to changes in their functional and health status in the interim. Ascertaining, as an extension of this analysis, whether there have been substitutions for different types of services over time in light of the patients' changed health and functional status. For example, are home health services used more in lieu of nursing home services?
- Describing and comparing out-of-pocket health care expenses relative to aged persons' health status, functional and cognitive disabilities, and access to informal caregiving services.
- Examining the impact of institutionalization and the medical expenses incurred prior to and after institutional placement on the spouse who is not institutionalized. This analysis will include the impact of one spouse's institutionalization on the other spouse's economic, residential, health, and functional status as well as the Medicaid spend-down process as experienced by the noninstitutionalized spouse.
- Refining the calibration of the underwriting factors used in computing the adjusted average per capita cost for establishing the capitation rates for aged Medicare enrollees joining health maintenance organizations and other prepayment plans. This will include combining detailed data on the functional and socioeconomic characteristics of the aged population from the 1982 and 1984 NLTCSs with Medicare utilization and expenditure data.
- Converting the data tape from the 1984 NLTCS to a format suitable for public distribution.
- Estimating what the Medicare expenditures would have been in 1982 and 1984 had the provisions of the Medicare Catastrophic Coverage Act (MCCA) of 1988 been in effect. (This was added to the project's scope of work in January 1989.)

Status: Public use data tapes from the 1982 and 1984 NLTCSs are available from the National Technical Information Service (NTIS). There are three parts to the package and each may be purchased separately:

- Documentation for the data tapes is available in paper copy or microfiche. The accession number is PB88-172267.
- Data from the 1982 and 1984 NLTCSs are available in two separate tapes. One contains data on persons interviewed in 1982 and 1984. This provides the longitudinal perspective on persons in the surveys. The second contains data on all persons who participated in the 1984 NLTCS including data on aged persons who became Medicare beneficiaries after the 1982 survey was conducted. This provides a cross-sectional perspective on functionally impaired aged Medicare beneficiaries in 1984. The 1984 data on persons in nursing homes are more complete than the data obtained in 1982. The accession number is PB88-172242.
- Medicare Part A bill data for services received between 1978 and 1985 by persons participating in the NLTCSs constitute the third tape. The coding scheme permits person-level linkage of the bill file to persons participating in the surveys. The accession number is PB88-172259.

In addition, the report entitled "A National and Cross-National Study of Long-Term Care Populations" is available from NTIS, accession number PB89-190342. This report covers all the tasks described except for the modification added in January 1989—estimating the impact of MCCA on Medicare expenditures had the provisions been in effect in 1982 and 1984. Among the salient findings were:

- The number of elderly persons in the United States who might need LTC services in the community or in institutions because of impairments in activities of daily living is expected to increase from about 6.8 million in 1985 to 19.0 million in 2040.
- Given optimistic assumptions about continuing decreases in the mortality rate, the number of elderly persons with functional impairments in activities of daily living could be as great as 23.6 million by 2060.
- These estimates could be significantly affected by prevention or improved treatment of disabling conditions such as arthritis. A 50-percent reduction in the prevalence of arthritis would reduce, by 2040, the number of persons with arthritis 1.5 million below current projections.

Findings also show that diseases for which we know the most about risk factors and control (e.g., heart diseases, stroke, and cancer) are lethal diseases that produce relatively little long-term disability. In contrast, the diseases that are not as well studied and for which we have fewer effective controls (e.g., dementia, osteoporosis, rheumatoid arthritis, and osteoarthritis) are chronic degenerative diseases that produce the most long-term disability. Thus, without considerable new research on these and other disabling diseases, total life expectancy is likely to increase more rapidly than disability-free life expectancy. This will tend to increase the prevalence of disability and the need for LTC services.

Long-Term Care Survey

Period:	September 1990-September 1991
Award:	Interagency Agreement
Agency:	National Institute on Aging 9000 Rockville Pike Bethesda, Md. 20892
Project Officer:	Judith A. Sangl Division of Long-Term Care Experimentation

Description: The Office of the Assistant Secretary for Planning and Evaluation and the Health Care Financing Administration agree to transfer funds to the National Institute on Aging (NIA) to support an existing NIA grant to Duke University, Center for Demographic Studies. This grant, number 1R37AG07198, is entitled Functional and Health Changes of the Elderly, 1982-1988. The National Long-Term Care Survey (NLTCS) is a detailed household survey of persons 65 years of age and over who have some chronic (90 days or more) functional impairment. The survey has been administered three times. The first, conducted in 1982, was devised as a cross-sectional survey. The second, conducted in 1984, added a longitudinal component to the sample design. The third, administered in 1989, used the cohorts from the previous surveys in addition to persons becoming 65 years of age to form a nationally representative sample of impaired elderly persons. To facilitate the use of the data base, the following tasks related to the 1982 and 1984 NLTCSs will be carried out under this agreement:

- Derivation of new longitudinal sample weights.
- Improvement of coding by checking consistency of survey items.
- Improvement in survey documentation.
- Seminars and education.

Status: This project is in the early developmental stage.

The Development of Long-Term Care Reform Strategy for New York's Office of Mental Retardation and Developmental Disabilities

Project No.:	11-C-99309/2
Period:	June 1988-December 1990
Funding:	$ 115,581
Award:	Cooperative Agreement
Awardee:	New York State Department of Social Services Division of Medical Assistance 40 North Pearl Street Albany, N.Y. 12243
Project Officer:	Nancy A. Miller Division of Long-Term Care Experimentation

Description: The New York Office of Mental Retardation and Developmental Disabilities is conducting a 2½-year project to develop a comprehensive plan and waiver application that would reform the financing, regulation, and service delivery of the mentally retarded and developmentally disabled (MR/DD) system in three districts covering eight New York counties. The State considers the demonstration as the first step toward statewide implementation. The objectives are to:

- Develop a financing system that will improve services to the MR/DD population by expanding the number and types of people to be served and the types of services to be provided.
- Change the manner in which quality of care is assured.
- Constrain growth in Federal expenditures for these services.

Waivers would alter the Medicaid basis of payment, revise the State Medicaid plan requirements, change how Medicaid funds can be used, and implement revised quality assurance regulations. The demonstration will test an alternative financing approach that approximates recently formulated departmental policy directions as developed by the Department of Health and Human Services working group on intermediate care facilities

for the mentally retarded. The project represents a major test of reform in the delivery of services for persons who are developmentally disabled.

Status: Both national and State-level advisory panels have been convened, issue papers have been completed, and a waiver application is being developed. The State is also exploring the option of seeking a Medicaid 2176 home and community-based care waiver to implement this project.

Community Care for Alzheimer's and Related Diseases

Project No.: 18-P-99020/3
Period: June 1987-December 1989
Funding: $ 127,970
Award: Grant
Grantee: The Urban Institute
Health Policy Center
2100 M Street, NW.
Washington, D.C. 20037
Project Officer: J. Donald Sherwood
Division of Long-Term Care Experimentation
Mandate: Omnibus Budget Reconciliation Act of 1986
(Public Law 99-509)

Description: The Urban Institute has analyzed data from the National Long-Term Care Channeling Demonstration (1982-84) to determine the range of services, sources, and costs of care used by community residents with cognitive impairment and to determine the risks of their entering nursing homes, as a function of physical and mental health status, and the types and amounts of care received in the community. The study is expected to determine the utility of the Channeling and other available data bases in identifying and determining the service utilization of community residents with cognitive diseases. It also will provide baseline information for the Medicare Alzheimer's Disease Demonstration.

Status: Four draft reports relating to the identification and service utilization of persons with cognitive diseases have been received. A final report incorporating these drafts is expected in late 1990. In addition, the Health Care Financing Administration has approved an additional task that involves assessing the feasibility of using a longitudinal data base from The Triage, Connecticut Community Care, Inc. This data base contains details on patient assessment and management systems that may provide additional information on the costs of persons with Alzheimer's and related diseases. As a result, an award was made through the Brandeis Policy Center cooperative agreement to conduct further studies with this data base.

Evaluation Design for Medicare Alzheimer's Disease Demonstration

Project No.: 500-87-0028
Period: October 1987-July 1989
Funding: $ 432,325
Award: Technical Support: Evaluation of Demonstrations
(See page 76)
Contractor: Mathematica Policy Research, Inc.
P.O. Box 2393
Princeton, N.J. 08543
Project Officer: Dennis M. Nugent
Division of Long-Term Care Experimentation
Mandate: Omnibus Budget Reconciliation Act of 1986
(Public Law 99-509)

Description: Section 9342 of Public Law 99-509 requires the Secretary of Health and Human Services to conduct at least 5 (and not more than 10) demonstration projects to determine the effectiveness, cost, and impact on health status and functioning of providing comprehensive services to Medicare beneficiaries who have Alzheimer's disease or related disorders. The legislation specifies that the project should be conducted over a period of 3 years in sites that are geographically diverse and located in States with a high proportion of Medicare beneficiaries. The services to be provided include case management; home and community-based services (e.g., adult day care and personal care services); and education, counseling, and other supportive services for the primary informal caregiver (i.e., the individual who provides most of the care) of the Alzheimer's patient. In 1987, a contract was awarded to Mathematica Policy Research, Inc., to assist the Health Care Financing Administration in developing the research design and evaluation plan for the demonstration.

Status: Two models of care, both of which include case management and a wide range of in-home and community-based services, are being studied. The two models vary according to the intensity of the case management clients receive and the amount of reimbursement that is available to pay for demonstration services. Eight sites were selected to participate and each began an initial planning phase in May 1989. A final report summarizing the activities performed under this design contract will soon be available from the National Technical Information Service.

Evaluation and Technical Assistance of the Medicare Alzheimer's Disease Demonstration

Project No.: 500-89-0069
Period: September 1989-September 1993
Funding: $ 1,999,812
Award: Contract
Contractor: Institute for Health and Aging
University of California, San Francisco
201 Filbert Street
San Francisco, Calif. 94133
Project Officer: Dennis M. Nugent
Division of Long-Term Care Experimentation

Mandate: Omnibus Budget Reconciliation Act of 1986 (Public Law 99-509)

Description: The Medicare Alzheimer's Disease Demonstration was authorized by Congress under Section 9342 of Public Law 99-509 to determine the effectiveness, cost, and impact on health status and functioning of providing comprehensive services to beneficiaries who have dementia. Two models of care, of which both provide case management, homemaker and personal care services, adult day care, and education and counseling for family caregivers are being studied. Case management activities include assessment, care planning, service arrangement, and patient monitoring. The two models vary by their ratios of clients to case managers and the amount of reimbursement that is available to pay for demonstration services. There are four Model A and four Model B sites participating in this demonstration. The Model A sites are Monroe County Long Term Care Program, Inc., Rochester, New York; Carle Clinic, Urbana, Illinois; Northeast Community Mental Health Center, Memphis, Tennessee; and Good Samaritan Hospital and Medical Center, Portland, Oregon. The Model B sites are Cincinnati Area Senior Services, Inc., Cincinnati, Ohio; Wood County Senior Citizens Association, Inc., Parkersburg, West Virginia; The Wilder Foundation, Minneapolis, Minnesota; and Miami Jewish Home and Hospital for the Aged, Miami, Florida.

This contract to evaluate the demonstration and to provide technical assistance to the eight sites was awarded on September 30, 1989. Major questions to address include:

- What factors are associated with the cost effectiveness and impact on health status of providing an expanded package of services to Medicare beneficiaries with Alzheimer's disease or related disorders?
- How do various services affect the functional status of patients and caregivers?
- What are the effects on caregiver burden (i.e., the responsibility of providing the care a person with dementia needs to continue to live at home)?
- Do services delay or prevent the institutionalization of persons with Alzheimer's disease?

Status: The operational phase began on December 1, 1989. At that time the sites started enrolling clients and providing the services authorized under the demonstration. The caseload buildup period will continue through December 31, 1990, followed by 1 year of operation at full caseload.

Research on Acquired Immunodeficiency Syndrome Cost and Utilization Experience in New York and California Medicaid Programs

Project No.: 18-C-99242/9
Period: June 1988-December 1990
Funding: $ 484,197
Award: Cooperative Agreement
Awardee: SysteMetrics/McGraw-Hill
104 West Anapamu Street
Santa Barbara, Calif. 93101
Project Officer: Penelope L. Pine
Division of Program Studies

Description: The purpose of this project is to:

- Use epidemiologic techniques to produce incidence analysis of acquired immunodeficiency syndrome (AIDS) from October 1982 to September 1987 for Medicaid in New York and from October 1982 to December 1988 for Medicaid in California.
- Study the eligibility patterns of AIDS patients in Medicaid.
- Develop a disease-staging algorithm for Medicaid AIDS patients.
- Provide a utilization and cost analysis for these population.

Status: Current activities include:

- Developing common definitions for key variables (including risk group and AIDS case definition).
- Constructing longitudinal person-level data files for research.
- Refining the disease-staging algorithm for AIDS.
- Conducting incidence, eligibility, and utilization analyses.

Preliminary findings from the longitudinal study of Medicaid eligibility patterns of persons with AIDS in California were presented at the 1989 Annual Conference of the American Public Health Association. Preliminary findings on the epidemiology, costs, and utilization of pediatric AIDS cases in New York State Medicaid (1983-87) were presented at the sixth International Conference on AIDS. Preliminary findings on utilization patterns for persons with AIDS in Medicaid from New York and California will be presented at the 1990 Annual Conference of the American Public Health Association.

Medicaid Home and Community-Based Waiver Programs for Acquired Immunodeficiency Syndrome Patients

Project No.: 99-C-98489/9
Period: August 1988-July 1990
Funding: $ 52,679
Award: Cooperative Agreement
Awardee: The RAND Policy Research Center
(See page 72)
Project Officer: Penelope L. Pine
Division of Program Studies

Description: The purpose of this project was to develop a background paper that identifies major research questions to evaluate the utilization and expenditure patterns of acquired immunodeficiency syndrome (AIDS) patients in State Medicaid home and community-based (HCB) waiver programs. The study's objectives were to identify appropriate data sources, review available literature on State waiver programs, and identify major research questions that should be

addressed. The project team explored the reasons States with large AIDS patient populations did not seek Medicaid HCB waivers.

Status: The project team reviewed current Medicaid AIDS waivers in California, Hawaii, New Jersey, New Mexico, Ohio, and South Carolina. Contacts were made with other States that considered using the waiver program. A RAND report entitled "AIDS Specific Home and Community-Based Waivers for the Medicaid Population" (R-3844-HCFA) was published in December 1989. An article analyzing Medicaid HCB waivers for AIDS patients is being prepared for the 1990 Annual Supplement of the *Health Care Financing Review.*

The Effects of the Human Immunodeficiency Virus Epidemic on the Uses of Medicaid by Women and Children

Project No.: 99-C-98489/9
Period: August 1989-December 1990
Funding: $ 155,096
Award: Cooperative Agreement
Awardee: The RAND Policy Research Center
(See page 72)
Project Officer: Penelope L. Pine
Division of Program Studies

Description: This study will determine changes in State Medicaid programs that have resulted from the spread of the epidemic of human immunodeficiency virus (HIV)-related diseases. An analysis of the effects of the acquired immunodeficiency syndrome (AIDS) epidemic on Medicaid expenditures, services, and funding for other Medicaid eligibles will be performed. In particular, RAND will review State AIDS programs to examine Medicaid use by women and children.

Status: RAND is collecting Medicaid utilization data from 1983 to 1989. The awardee will analyze State variations in AIDS caseload volume compared with utilization for traditional Medicaid populations, especially women and children. Case studies from several States on Medicaid experience with HIV-infected women and children are nearly completed.

Financing of Acquired Immunodeficiency Syndrome and Acquired Immunodeficiency Syndrome-Related Complex Treatment Costs by Medicaid and Medicare

Project No.: 18-P-99522/3
Period: May 1990-April 1994
Funding: $ 648,985
Award: Grant
Grantee: Maryland Department of Health and Mental Hygiene
Center for AIDS Services, Planning, and Development
201 West Preston Street
Baltimore, Md. 21201
Project Officer: Penelope L. Pine
Division of Program Studies

Description: The State of Maryland proposes to develop a longitudinal data base of persons with human immunodeficiency virus (HIV) from 1981 through 1991. The project is expected to provide related-illness information on the extent to which patient, provider, and payer characteristics influence cost and use of health services on expenditures in Maryland under the Medicaid and Medicare programs. There are four major aspects to the study. The first is to maintain the data systems of the Maryland Human Immunodeficiency Virus Information System as required to measure program use and financing. The second is to compare and refine three different disease-staging approaches for predicting resource consumption and treatment outcome during the course of the HIV disease. The third is a retrospective assessment of health services used by pediatric, adolescent, and adult patients with HIV. The fourth is to use annual utilization, reimbursement, and financing data to measure trends.

Status: This project is in the early developmental stage.

Case-Management Studies

Case-Managed Medical Care for Nursing Home Patients

Project No.: 95-P-98346/1
Period: July 1983-September 1990
Award: Grant
Grantee: Massachusetts Department of Public Welfare
180 Tremont Street
Boston, Mass. 02111
Project Officer: Dana B. Burley
Division of Long-Term Care Experimentation
Mandate: Omnibus Budget Reconciliation Act of 1986
(Public Law 99-509)

Description: The Health Care Financing Administration (HCFA) granted Medicare and Medicaid waivers to the Massachusetts Department of Public Welfare to permit fee-for-service reimbursement for the provision of medical services by physician-supervised nurse practitioners and physician assistants (NP/PAs) for residents of nursing homes. This permits increased medical monitoring that is expected to generate cost savings as a result of fewer hospital admissions and outpatient visits. Providers are responsible for managing and monitoring the health care and medical condition of all enrollees to assure that the primary care needs of nursing home patients are met in a timely fashion, often without resorting to the hospital emergency room. Initial physical exams, medical evaluation, and reevaluations are being performed by the NP/PA in the nursing home. The NP/PA operates under written protocols that describe the common medical problems to be encountered and appropriate evaluation and treatment procedures. The supervising physician reviews and countersigns the NP/PA's evaluation and prescriptions.

The physician is also consulted in any unusual situation or emergency.

Status: The RAND Corporation, as part of the Research Center Cooperative Agreement with HCFA, has completed an evaluation of this project's impact on the use and cost of nursing home and hospital services. This evaluation relies primarily on Medicare and Medicaid claims data. The Pew Foundation awarded a grant to the University of Minnesota to assess the project's impact on quality of care. Section 9413 of Public Law 99-509 mandated the continuation of this project through July 1989. The project was further extended to allow pending legislation that would have incorporated the coverage under Medicare. Section 6114 of the Omnibus Budget Reconciliation Act of 1989 provided Medicare coverage of physician and nurse practitioner teams operating in nursing homes. The services under this demonstration ended on September 30, 1990. The evaluation report (R-3822-HCFA) is completed and available from RAND.

Evaluation of Massachusetts Case-Managed Medical Care for Nursing Home Patients

Project No.: 99-C-98489/9
Period: April 1985-May 1989
Funding: $ 393,513
Award: Cooperative Agreement
Awardee: The RAND Policy Research Center
(See page 72)
Project Officer: Tony F. Hausner
Division of Long-Term Care Experimentation
Mandate: Omnibus Budget Reconciliation Act of 1986
(Public Law 99-509)

Description: The Health Care Financing Administration (HCFA) granted Medicare and Medicaid waivers to the Massachusetts Department of Public Welfare to permit fee-for-service reimbursement for the provision of medical services by physician-supervised nurse practitioners and physician assistants for 6,500 nursing home residents. The project permitted increased medical monitoring that was expected to generate cost savings as a result of fewer hospital admissions and hospital outpatient visits. This evaluation focused on the impact of the project on the use of nursing home services and hospital emergency room and outpatient services. The University of Minnesota conducted a related evaluation on the impact of the project on quality of care.

Status: RAND and Minnesota retrospectively collected data for the study period March 1986 to March 1987. A draft final report, "Results from the Evaluation of the Massachusetts Nursing Home Connection Program" (WD-4462-HCFA/PCT), was submitted to HCFA in June 1989. The final version (R-3822-HCFA/PCT) is available from RAND. The study found improvements in the quality of care and reductions in hospital costs for some patients.

Other Studies

Long-Term Care: Elderly Service Use and Trends

Project No.: 17-C-99376/3
Period: August 1989-December 1990
Funding: $ 245,249
Award: Cooperative Agreement
Awardee: The Brookings Institution
175 Massachusetts Avenue, NW.
Washington, D.C. 20036-2188
Project Officer: Judith A. Sangl
Division of Long-Term Care Experimentation
Mandate: Medicare Catastrophic Coverage Act of 1988
(Public Law 100-360)

Description: This project has three objectives:

- An analysis of the financial status of nursing home users.
- An analysis of the determinants of home care use.
- Projections of the numbers and level of disability among the elderly and their use of long-term care services.

Data from the following major surveys will be used—the 1982-84 National Long-Term Care Surveys, the 1984-86 Supplement on Aging/Longitudinal Study of Aging, and the 1984 Survey of Income and Program Participation. Data will be analyzed using cross-tabulations, logistic and least squares regression analyses, and the Brookings/Intermediate Care Facility simulation model (updated and revised).

Status: Draft papers on the determinants of home care use and the relationship between informal and formal home care use have been completed. Other papers will be completed by the end of 1990.

Cohort Analysis of Disabled Elderly

Project No.: 99-C-98526/1
Period: August 1988-November 1990
Funding: $ 89,986
Award: Cooperative Agreement
Awardee: Brandeis University Research Center
(See page 73)
Project Officer: Judith A. Sangl
Division of Long-Term Care Experimentation
Mandate: Medicare Catastrophic Coverage Act of 1988
(Public Law 100-360)

Description: This project applies event history analyses to nationally representative data sources to derive estimates of the transitions between various health status categories and the duration within categories for different age groups. These data sources include multiple years of National Health Interview Surveys, mortality records, National Long-Term Care Surveys,

Longitudinal Study on Aging, and the National Nursing Home Surveys. Researchers will also estimate, based on the type and level of severity of morbidity and disability categories, the risks involved and the duration of specific types of acute and long-term care.

Status: Many of the key data sets have been formatted for analysis and initial analyses have been conducted. The final analyses will be completed by the end of 1990.

Study of Alternative Out-of-Home Services for Respite Care

Project No.: 99-C-98526/1
Period: September 1988-February 1990
Funding: $ 239,495
Award: Cooperative Agreement
Awardee: Brandeis University Research Center
(See page 73)
Project Officer: Dana B. Burley
Division of Long-Term Care Experimentation

Description: This study examined the advisability of expanding the respite care benefit to cover out-of-home services such as those provided in a nursing home or an adult day care center as an alternative to in-home respite care. Brandeis University researchers assessed the advisability of broadening the respite care benefit to include alternative services, giving consideration to cost, access, quality of care, and the feasibility of implementation. This assessment was accomplished using information collected from existing data sets and from ongoing respite programs and demonstrations.

Status: The final report has been received in the Office of Research and Demonstrations. The recommendation made, based on this report, is to evaluate the experience of offering the respite benefit as an in-home-only benefit, as currently legislated, before expanding to out-of-home services. With the repeal of the Medicare Catastrophic Coverage Act of 1988, this project is no longer congressionally mandated.

High-Cost Hospice Care

Project No.: 99-C-99168/3
Period: August 1990-January 1991
Funding: $ 42,521
Award: Cooperative Agreement
Awardee: Project HOPE Research Center
(See page 74)
Project Officer: Feather A. Davis
Division of Program Studies
Mandate: Omnibus Budget Reconciliation Act of 1989
(Public Law 101-239)

Description: The purpose of this project is to identify what Medicare hospice services are high-cost, determine or estimate the average cost of these services, and ascertain from a panel of clinical experts dimensions of use of high-cost procedures. Dimensions of use include measures such as the number of patients receiving hospice services, frequency and duration of use of these services, the diagnoses involved, and trends in the use of these procedures for palliation versus curative care. Although the particular focus will be on techniques used in hospice care, Project HOPE will compare these with the pattern of palliative care occurring in nonhospice care settings as well as the use of these same techniques for curative care.

Status: This project is in the early developmental stage.

Long-Term Care Studies (Section 207)

Project No.: 500-89-0047
Period: September 1989-September 1994
Funding: $ 3,790,234
Award: Contract
Contractor: Health and Sciences Research Incorporated
9300 Lee Highway
Fairfax, Va. 22031
Project Officer: Marvin A. Feuerberg
Division of Long-Term Care Experimentation

Description: The purpose of this project is to conduct research related to the Health Care Financing Administration's Medicare and Medicaid programs in the area of long-term care (LTC) policy development. The project will focus primarily on four major areas:

- The financial characteristics of Medicare beneficiaries who receive or need LTC services.
- How the Medicare beneficiaries' characteristics affect their utilization of institutional and noninstitutional LTC services.
- How relatives of Medicare beneficiaries are affected financially and in other ways when beneficiaries require or receive LTC services.
- How the provision of LTC services may reduce expenditures for acute care health services.

Analyses will use existing LTC and other survey data bases (e.g., the National Long-Term Care Surveys, the Longitudinal Study of Aging, the National Nursing Home Survey, the Survey of Income and Program Participation, and the National Medical Care Expenditure Survey). Medicare administrative records and other extant information will also be utilized. A number of focused analytic studies, policy reports, syntheses, and special studies are required under the contract.

Status: The analytic plan for this project has been completed and a number of studies have been initiated. With the repeal of the Medicare Catastrophic Coverage Act of 1988, this project is no longer congressionally mandated.

Implementing Federal Regulations in Nursing Homes: A Conceptual Paper

Project No.: 99-C-99169/5
Period: April 1990-September 1991

Funding: $ 52,630
Award: Cooperative Agreement
Awardee: University of Minnesota Research Center
(See page 75)
Project Officer: Marvin A. Feuerberg
Division of Long-Term Care Experimentation

Description: The purpose of this project is to develop a conceptual paper on the issues involved in regulating the use of psychoactive drugs in nursing homes, the range of problems that the long-term care (LTC) community and Health Care Financing Administration (HCFA) surveyors might face in implementing these regulations, the quality of large-scale data bases available for examining these issues and problems, and the research designs that would be most appropriate for studying the impact of HCFA guidelines on the use of psychoactive drugs by nursing home elderly. Two panels of experts —a practitioner advisory panel consisting of five local practitioners in the LTC community and a national expert panel of researchers experienced in psychoactive drug use by nursing home elderly—will be used in this project.

Status: This project is in the early developmental stage.

Efficacy of Nursing Home Preadmission Screening

Project No.: 18-C-99213/1
Period: June 1988-December 1990
Funding: $ 376,698
Award: Cooperative Agreement
Awardee: Brown University
Division of Biology and Medicine
Providence, R.I. 02912
Project Officer: Phyllis A. Nagy
Division of Long-Term Care Experimentation

Description: In recent years, more than 30 States have adopted some form of preadmission screening (PAS), although the scope and methodology of programs vary considerably. The purpose of this project is to evaluate a nursing home PAS methodology developed by Brown University for the State of Connecticut. This screen is designed to identify those persons who would be institutionalized if community-based services (under the State's Section 2176 Medicaid waiver program) were not available. Brown University will analyze the extent to which the screen accurately predicts the need for a nursing home level of care or an equivalent level of community care. This study is expected to refine Connecticut's screening instrument, thereby helping to determine the most cost-effective long-term care placement for each client. The awardee also will investigate the predictive validity of several other States' PAS methodologies. A summary of findings, along with a synthesis of other States' efforts, will determine whether PAS programs can successfully identify at-risk individuals and should provide guidance to the Health Care Financing Administration in identifying the most effective approaches.

Status: The cooperative agreement was awarded in June 1988. A project start date of September 1, 1988, was approved to provide the awardee with adequate time to hire appropriate staff. The predictive validity of Connecticut's preadmission screen decision rules has been assessed preliminarily by applying them to each of three data sets, as well as a synthetic data set. These data sets include the South Carolina Community Long-Term Care Demonstration, the Georgia Alternative Health Services Project, and the National Long-Term Care Channeling Demonstration. During the project's second year, screening and assessment outcome data for a 6-month cohort of Connecticut Community-Based Services program applicants were reviewed. Analyses of these data will have a significant impact on the planned revision of Connecticut's screen. A final project report is expected in December 1990.

Financial Impact to Beneficiaries of Nursing Home Care

Project No.: 99-C-98526/1
Period: August 1988-August 1990
Funding: $ 129,888
Award: Cooperative Agreement
Awardee: Brandeis University Research Center
(See page 73)
Project Officer: Judith A. Sangl
Division of Long-Term Care Experimentation
Mandate: Medicare Catastrophic Coverage Act of 1988
(Public Law 100-360)

Description: The project used The Urban Institute's Transfer Income Model-2 (TRIM-2) for State estimates and the Connecticut Nursing Home Inventory data base to calculate nursing home use and payments. TRIM-2 is a microsimulation model based on the 1984 Current Population Survey used in forecasting use and payments. The Connecticut Inventory data base contains patient-specific information on all nursing home patients (private and public) from 1977 to the present. In addition, the 1985 National Nursing Home Survey was used to analyze several dimensions of nursing home use. From the collected data, estimates for the nursing home patients' spend-down provision were made.

Status: A draft report, "Changes in Duration and Outcomes of Nursing Home Stays: 1977-1985," was completed. The report concludes that changes have occurred in the overall composition of nursing home admissions from 1977 through 1985. The analysis indicates that nursing home patients have become older, more disabled, and more likely to have been admitted for terminal care. A draft report, "Nursing Home Length of Stay and Spend-down: Connecticut, 1977-1985," was completed. Data on nursing home stays over an 8-year period, October 1977 to September 1985, are available. Person-specific records were merged with death certificates and Medicaid eligibility dates, and multiple stays for individuals were studied using

life-table methodologies. One of the major study findings is the distribution of the length of nursing home stay based on person-level use (multiple stay rather than single stays is markedly different). For example, Connecticut's data based on person-level use indicates that 39 percent of an admission cohort are still residents at 2 years compared with only 16 percent based on single stays. This information has important implications for design of private insurance policies or public policy options. Another major finding is that approximately 21 percent of individuals not covered by Medicaid who enter nursing homes ultimately convert to Medicaid. The timing of spend-down was over 1 year for half of the individuals which is longer than indicated by some other studies. A final major finding is that the estimate of the proportion of Medicaid to total nursing home days is 55.3 percent. However, Medicaid's proportion to the cost of care is expected to be less because of the contribution from income of persons spending down.

Goals and Strategies for Financing Long-Term Care

Project No.: 99-C-99169/5
Period: August 1989-October 1990
Funding: $ 95,409
Award: Cooperative Agreement
Awardee: University of Minnesota Research Center
(See page 75)
Project Officer: Nancy A. Miller
Division of Long-Term Care Experimentation

Description: The purpose of this project is to use concepts drawn from a number of disciplines—economics, decision sciences, policy analysis, sociology, and demography—to develop statements of possible objectives for long-term care insurance. Defining objectives will include an analysis of benefits and costs from potential changes in financing and an analysis of expected behavioral changes in response to changes in financing. The meaning of these objectives will then be illustrated by applying them to several types of policy proposals:

- Subsidization of private insurance.
- Employer-provided insurance.
- Whole-life versions of insurance.
- Means-tested public insurance.
- Medicaid-equivalent subsidies.
- Catastrophic public insurance.
- Public provision of information on Medicare coverage and the need for insurance.

Status: Analyses have been completed and a final report is being prepared.

Prior and Concurrent Authorization Demonstrations

Project No.: 500-87-0029
Period: September 1987-July 1992
Funding: $ 827,200
Award: Technical Support: Evaluation of Demonstrations
(See page 76)
Contractor: Lewin/ICF
1090 Vermont Avenue
Washington, D.C. 20005
Project Officer: Tony F. Hausner
Division of Long-Term Care Experimentation
Mandate: Omnibus Budget Reconciliation Act of 1986
(Public Law 99-509)

Description: Under Section 9305 of Public Law 99-509, the Secretary of Health and Human Services is required to conduct a demonstration program concerning prior and concurrent authorization for post-hospital extended care services and home health services furnished under Part A or Part B of Title XVIII. This legislation responds to concerns expressed by home health agencies (HHAs) and skilled nursing facilities (SNFs) that under the current system of Medicare payment they cannot adequately predict what services the fiscal intermediaries (FIs) will deny as noncovered. In recent years, the number of visits denied by FIs has increased steadily. It is hypothesized that prior authorization (PA) and concurrent authorization (CA) payment approaches will reduce the number of services denied without increasing Medicare expenditures. Under PA, providers submit treatment plans to FIs for review prior to the start of care; under CA, plans of treatment are submitted when care begins. In both approaches, the provider receives notification from the FI about how many services will be covered. This provides greater certainty about coverage and payment before services are given. The law requires that the demonstration include at least four projects and be initiated by January 1, 1987, and that the Secretary must evaluate the demonstration and report to Congress on the evaluation. The evaluation and report must address:

- The administrative and program cost for prior and concurrent authorization compared with the current system of retroactive claims review.
- The impact on access and availability of post-hospital services and timeliness of hospital discharges.
- The accuracy and cost savings of payment determinations and rates of claims denials compared with the current system.

The Bureau of Program Operations, Health Care Financing Administration (HCFA), implemented a home health concurrent authorization pilot project in July 1987. This project was initiated in Illinois and in the entire Dallas region and is still in progress. Lewin/ICF implemented the SNF demonstration in September 1989 at sites in Tennessee and Indiana. Lewin/ICF is responsible for evaluating both the home health pilot project and the SNF demonstration.

Status: A Report to Congress based on Lewin/ICF's preliminary evaluation of the home health project and

the design of the SNF project was submitted to Congress in August 1990. The SNF prior authorization demonstration ends in November 1990. Both an update of the home health pilot project and an evaluation of the SNF demonstration will be submitted to HCFA by February 1992.

Changes in Post-Hospital Care Utilization Among Medicare Patients

Project No.: 99-C-98489/9
Period: August 1989-July 1991
Funding: $ 102,247
Award: Cooperative Agreement
Awardee: The RAND Policy Research Center
(See page 72)
Project Officer: Marni J. Hall
Division of Long-Term Care Experimentation

Description: In this project, a data file was created linking Medicare billing records for inpatient hospital and post-hospital care for 1987 and 1988. RAND is using this file to document changes in post-hospital utilization among Medicare patients. The analyses will include an examination of skilled nursing facility, home health agency, and rehabilitative hospital care.

Status: This study is in the analysis stage. A report of the findings is expected in Summer 1991.

Activities of Daily Living Measurements as Determinants of Eligibility

Project No.: 99-C-98526/1
Period: August 1989-October 1990
Funding: $ 99,991
Award: Cooperative Agreement
Awardee: Brandeis University Research Center
(See page 73)
Project Officer: Judith A. Sangl
Division of Long-Term Care Experimentation

Description: This study will use data from the National Long-Term Care Surveys, the National Long-Term Care Channeling Demonstration, and the Social Health Maintenance Organization Demonstrations comprehensive assessment form to examine issues associated with defining and measuring activities of daily living (ADLs) for use as eligibility criteria for Medicare services. A cost analysis will be performed, and other issues associated with using ADL scores as eligibility criteria will be discussed. Among the questions to be addressed are:

- What level of ADL impairments is used to trigger eligibility?
- Which ADL items should be used?
- Under what circumstances should assessments be performed and by whom?

Status: Two draft reports have been received. The first, "The Administration of Eligibility for Community Long Term Care," considers issues and makes recommendations on eligibility criteria; timing and setting of assessments; assessment items; assessor qualifications and training; and review and appeal procedures. The second, "Home Care for the Disabled Elderly: Predictors and Expected Costs," uses a Tobit estimation procedure on data from the 1982 National Long-Term Care Survey. Major predictors of the number of paid in-home visits per week include age, sex, living arrangement, number of informal helpers, income, and functional status. Cognitive impairment was not found to be a significant predictor. The parameter estimates then were used to simulate the cost of providing home care services to select populations based on various combinations of program eligibility standards and the costs of some anticipated behavioral responses to the institution of a home care program.

Long-Term Care Supply and Medicare Hospital Utilization

Project No.: 17-C-99442/1
Period: August 1989-August 1990
Funding: $ 47,986
Award: Cooperative Agreement
Awardee: Abt Associates, Inc.
55 Wheeler Street
Cambridge, Mass. 02138
Project Officer: Nancy A. Miller
Division of Long-Term Care Experimentation

Description: The purpose of this project was to investigate how local variations in the availability of nursing home beds affect Medicare hospitalization rates. Effects on the number of admissions, the number of hospital readmissions, the number of hospital days used, and the costs per Medicare Part A enrollee were evaluated. Urban and rural differences were assessed. The impacts of community long-term care services, Medicare risk-contract health maintenance organization services, and the prospective payment system on Medicare Part A utilization were evaluated.

Status: Analyses have been completed and a final report is being prepared.

Impacts of Long-Term Care Supply Differences on Medicare Service Use

Project No.: 99-C-98526/1
Period: August 1990-February 1991
Funding: $ 80,204
Award: Cooperative Agreement
Awardee: Brandeis University Research Center
(See page 73)
Project Officer: Phyllis A. Nagy
Division of Long-Term Care Experimentation

Description: This study will identify and assess methodological and practical problems associated with a potential investigation of access to long-term care (LTC)

service and the resulting impact on beneficiary use of Medicare-covered services. These services include hospital care, Medicare-covered home health care, and Medicare-covered skilled nursing facility care. The project will directly address issues, which have been studied in various models, of the effects of LTC access and supply on utilization of health services. The project will also develop a suggested study design on this topic.

Status: This project is in the early developmental stage. The findings are expected to be incorporated in a draft final report which is due by the end of December 1990. The final report is expected by the end of February 1991.

Urban/Rural Variation in Home Health Agency and Nursing Home Services

Project No.: 99-C-98526/1
Period: September 1989-November 1990
Funding: $ 155,096
Award: Cooperative Agreement
Awardee: Brandeis University Research Center
(See page 73)
Project Officer: Terry Moore
Division of Long-Term Care Experimentation

Description: Brandeis University and The Urban Institute will compare urban and rural home health services and nursing home services to determine variation between provider characteristics and service utilization patterns. The underlying cost structures of urban and rural home health agencies will be studied as well. This study is national in scope and utilizes several Medicare data bases for analysis.

Status: This project is near completion; final reports will be submitted in late November 1990.

Analysis of Costs, Patient Characteristics, Access, and Service Use in Urban/Rural Home Health Agencies

Project No.: 99-C-99169/5
Period: September 1989-November 1990
Funding: $ 103,420
Award: Cooperative Agreement
Awardee: University of Minnesota Research Center
(See page 75)
Project Officer: Terry Moore
Division of Long-Term Care Experimentation

Description: The purpose of this project is to study urban and rural differences in home health agency costs, patient characteristics, access to care, and service utilization patterns. The study will include two types of analyses:

- Costs, patient characteristics, and service utilization patterns using home health care data from Wisconsin.
- Access to home health care services using patient-level Medicare data.

Mathematica Policy Research, Inc., as subcontractor for the project, will apply two of the "Aftercare Guidelines" to the Medicare plan of treatment data to develop a measure of access between urban and rural recipients of home health care.

Status: This project is near completion; final reports will be submitted in late November 1990.

Determinants of Home Care Costs

Project No.: 99-C-98526/1
Period: August 1990-July 1991
Funding: $ 125,140
Award: Cooperative Agreement
Awardee: Brandeis University Research Center
(See page 73)
Project Officer: Judith A. Sangl
Division of Long-Term Care Experimentation

Description: The major aim of this project is to develop a better understanding of the relationship between economic and program status and formal home care use and costs. The relationship between health status (i.e., functional, cognitive, and medical) and the use and costs of formal home care will be examined. If data permit, the analysis will be expanded to include informal home care. If this is possible, the mix of formal and informal care received by individuals can be explored. Data from Connecticut Community Care, Inc., will be used.

Status: This project is in the early developmental stage.

Nurse Practitioner/Physician Assistant Aggregate Visit Demonstration

Project No.: 95-C-99625/1
Period: September 1990-September 1993
Funding: $ 130,538
Award: Cooperative Agreement
Awardee: The Urban Medical Group
545 D Centre Street
Jamaica Plain, Mass. 02130
Project Officer: Phyllis A. Nagy
Division of Long-Term Care Experimentation
Mandate: Omnibus Budget Reconciliation Act of 1989
(Public Law 101-239)

Description: Under Section 6114(e) of Public Law 101-239, the Medicare program provides Part B coverage for medical visits to nursing home residents rendered by nurse practitioners who are members of a physician/physician assistant/nurse practitioner team. Under this legislation, the number of visits supplied to any nursing home patient is limited to an average of 1½ visits per month. Section 6114(e) mandates a demonstration project under which the visit limitation would be applied on an average basis over the aggregate total of residents receiving services from members of the provider team.

Status: The project is in the early developmental stage. A Massachusetts demonstration project, Case Managed Medical Care for Nursing Home Patients, which used nurse practitioners and physician assistants to provide visits to nursing home patients, ended on September 30, 1990. The study proposes to use these existing demonstration sites for the mandated demonstration project. This will effectively eliminate the need to recruit and/or train provider teams for new sites and will allow the study to focus on operational questions and carrier capabilities. The project will be conducted in two parts. The first will be a planning and development stage, which will include finalizing the research design, obtaining consent from all providers and patients, and software development and implementation by the carrier. The second will be the actual implementation and operation of the demonstration.

List of Congressionally Mandated Studies

Quality of Care

Physician and Ambulatory Care Payment Systems

Capitated Payment Systems

Hospital Payment

Program Efficiencies, Analyses, and Refinements

Health Care Prevention and Access

Subacute and Long-Term Care

*U.S.G.P.O:1991-281-877:43906

Availability of Project Reports and Results

As extramural projects are competed, the final reports are placed with the National Technical Information Service (NTIS) for public access. For those projects with final reports at NTIS, the accession number for ordering purposes is given in the project writeup. Reports are available in hard copy or microfiche form; costs vary depending on the size of the reports. Further information may be obtained from: National Technical Information Service, Document Sales, 5285 Port Royal Road, Springfield, Virginia 22161, (703) 487-4650.

A few final reports are published by the Health Care Financing Administration. These reports are available for sale from the U.S. Government Printing Office (GPO). Reports must be ordered by title and stock number directly from GPO. For those projects with published final reports, ordering information is given in the project writeup. Send check or money order for the price listed and make payable to: Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

In addition, results from intramural and extramural research projects and demonstrations are often featured in the *Health Care Financing Review*, the Agency's quarterly journal. The journal also offers synopses on newly awarded research and demonstration projects being funded by the Health Care Financing Administration. The *Review* is available on a subscription basis from the Superintendent of Documents for $13.00 ($16.25 foreign). Subscribers receive four quarterly issues and one annual single-theme supplement per year.

U.S. Department of
Health and Human Services
Health Care Financing Administration
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